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COURSE OF LECTURES
ON
DISEASES OF THE SKIN;
THEIR
HISTORY, PATHOLOGY, AND TREATMENT.

Delivered in the Middlesex Hospital, during the Summer Session, 1842, *by*

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LECTURE XXXI.

DISEASES OF THE SEBACEOUS GLANDS.

DISEASE of glandular organs is chiefly manifested in alteration or modification of their secreted product; hence, in the sebaceous organs, we are made aware of the presence of disease by an augmentation, diminution, or alteration of their secretion, by its retention, or by the local signs of inflammation of the glands and their adjacent textures. Under these five heads the whole of the diseases of the sebaceous glands are included.

Augmentation of Secretion.

The quantity of sebaceous secretion poured out upon the skin varies very considerably in different individuals; but sometimes we meet with instances in which this secretion is excessive, giving rise to a *sebaceous flux* or *stearrhœa*. The more common seat of stearrhœa is the face, and especially the nose; but it may occur also upon other parts of the body where the sebaceous glands are numerous. The state of the secretion, when effused upon the skin, offers two principal varieties, in one of which it is diffluent and oily, and in the other inspissated having a tendency to concrete in the form of a thin crust. The skin also, in some cases, is not altered in its hue, while in others it is congested, having a dull, reddish hue and being at the same time somewhat swollen.

The *treatment* of stearrhœa should consist in regulating the secretions, which are generally disturbed, and in checking the local disorder by astringent applications. When the surface is encrusted, the sebaceous matter must be removed by the use of soap. To reduce the congestion of the follicles I am in the habit of having recourse to local pressure.

Diminution of Secretion.

Diminution of the sebaceous secretion is the cause of a very disagreeable state of the skin; it is dry, harsh, scaly, and disposed to crack under the movements of the body. I have seen this state of skin at all periods of life, and it has appeared to me to result from imperfect innervation of the peripheral textures. Not unfrequently it is associated with coldness of surface and of the extremities.

The *treatment* of this state of skin is the daily use of the shower-bath, occasional warm-baths, the vapour-bath, and local stimulation of the skin; added to which the state of the system must be attended to.

Alteration of Secretion.

ICHTHYOSIS SEBACEA.

Besides increase of quantity, the sebaceous secretion is sometimes altered in its quality, and manifests a disposition to concrete on the surface of the epidermis in considerable quantity. From the movements of the body the concreted matter is broken in the direction of the creases of the skin into small polygonal masses, which, retaining their adherence to the epidermis, resemble so many small scales. The scales increase in thickness by fresh deposits from beneath, and they are more or less altered in colour by exposure to the air and by contact with the particles of dust floating in that medium; hence they have commonly a greyish or brownish hue. They exfoliate occasionally, particularly in the summer season, and are followed by the production of a fresh crop; but sometimes they remain adherent for months and years without undergoing any change. The more common seat of this affection is the face, especially the nose and forehead, but it occurs also in other parts of the body where the sebaceous glands are numerous. I have seen it well developed

in the armpits, and also upon the abdomen. From its singularity of appearance this disorder is liable to be mistaken for ichthyosis, and from its resemblance to that disease I have termed it *ichthyosis sebacea*. There is this characteristic difference, however, between these two diseases; namely, that in ichthyosis the epidermis is altered, ichthyosis being an hypertrophy of the epidermis; whereas in ichthyosis sebacea the epidermis is sound, as may be demonstrated by lifting these concreted scales from its surface.

In the *treatment* of ichthyosis sebacea it is necessary in the first place to remove the scaly concretion, and in the second to promote the healthy action of the sebaceous glands. The first of these objects is to be attained by washing with warm water and soap, after the application of a fomentation steeped in a weak solution of subcarbonate of soda. The second indication is to be effected by frequent ablution, the shower-bath, if the disorder be extensive, frictions with a rough towel, sea-bathing, and astringent applications. Of the latter I have found the sulphate of copper and alum most serviceable. The local measures will be much aided by a course of laxative or alterative medicines.

Retention of Secretion.

Under this head I have to describe to you several affections of the sebaceous glands, in some of which the aperture of the follicle remains *open*, and offers no mechanical obstacle to the discharge of the secretion, while in others the aperture of the follicle is *closed*, and consequently all escape is prevented. The disorders in which the aperture of the follicle is closed are three in number, namely, Comedones, Sebaceous Accumulations, and Small Sebaceous Tumours.

COMEDONES OR GRUBS.

Comedones, or grubs, as they are popularly termed, are those small collections of sebaceous substance which take place in the sebaceous follicle, and becoming inspissated in its excretory outlet, choke up the canal and prevent the escape of the natural secretion. That portion of the sebaceous substance which reaches the surface becomes blackened by contact with the dust and dirt contained in the atmosphere, and a small round black spot, corresponding with the aperture of the follicle, is the consequence. In some skins the whole surface of the face is studded with these black spots, or they are especially numerous on some particular part, as upon the nose. When the skin is squeezed the concreted sebaceous substance is pressed out of its excretory duct, and being moulded by the aperture through which it has passed assumes the appearance of a small maggot, to which the black extremity serves as a head. This is the origin of the term *grub*, and, were you to believe all that you are told, you would meet with those who had seen it walk across their finger-nail. When the sebaceous substance remains impacted for a length of time, as is often the case, it becomes hard and horny; I have sometimes seen forty or fifty of these small horns in a cluster, projecting from the skin.

When examined with the microscope, comedones are found to be composed of sebaceous substance, and sometimes to contain numerous minute hairs and the entozoon folliculorum. The latter does not exist in the condensed comedo.

The *treatment* of comedones calls for a copious use of soap and warm water with a soft brush, in the first instance, and afterwards the habitual use of cold water to the skin in the performance of the customary ablutions. The shower-bath and sea-bathing, by acting as a general tonic to the skin, are useful in this affection. A lotion, containing two grains of the bichloride of mercury to the half-pint of water or mixture of almonds, is also an useful remedy.

SEBACEOUS ACCUMULATIONS.

Instead of retaining the small dimensions of the comedo, the sebaceous substance sometimes collects to the extent of forming a small tumour within the substance of the dermis. This tumour produces but little projection on the surface, from the nature of the position which it occupies, but sometimes attains considerable size, measuring three quarters of an inch or more in diameter. Its situation is marked by an aperture of various size, by means of which the darkened sebaceous matter may be seen and withdrawn. Sometimes the sebaceous substance projects through this aperture, and, becoming hard, constitutes a kind of horn.

Upon examination with the microscope I have found the constituent substance of these accumulations beautifully laminated, and composed almost exclusively of epidermic cells.

The *treatment* of these collections requires the removal of their contents and the use of some stimulant, such as a solution of nitrate of silver, to produce their obliteration.

SMALL SEBACEOUS TUMOURS.

Molluscum Contagiosum.

In a third form of sebaceous accumulation the inspissated secretion is not confined to a follicle or to the excretory duct of a sebaceous gland, but extends likewise into the branching tubuli of the latter. The gland so affected causes a prominence of the skin, and a small globular tumour is formed, which is flattened or depressed on its summit and more or less pedunculated. The little tumour is whitish and glossy in appearance, and in general aspect resembles a small unripe currant; the depression in the

centre of its summit is the aperture of the excretory duct filled with inspissated sebaceous substance, and the circumference is slightly lobulated.

Examined anatomically these little tumours present all the characters of a small conglomerate gland; they have several lobules arranged around an excretory duct, and the lobules are composed of ramified ducts and terminal sacculi. The sebaceous substance impacted in the ducts, seen with the microscope, is found to be composed of sebaceous cells and epidermic scales. The sebaceous cells are oval or ovoid in shape and measure about $\frac{1}{1\,2\,5}$ in length by $\frac{1}{2\,5\,0\,0}$ in breadth; they are nucleated, and contain more or less of granular sebaceous substance.

It is to these little tumours that Bateman gave the specific designation, *contagiosum*, from a belief in their contagious nature. Several eminent writers have adopted the same opinion; but it has appeared to me that the proof of contagion in the recorded cases is far from being established. I have myself seen twelve cases of this disease, and my present experience is at variance with the supposition.

The *treatment* of these little tumours consists in snipping them through with a pair of scissors and applying the nitrate of silver to the cut surface. You must remember that they are to be cut through, for they are little sensitive, and the operation is scarcely felt; but if you attempt to cut them entirely off you will then be wounding the sound integument, and consequently give pain. Any general symptoms that may be present should be treated on general principles.

We now come to those diseases which consist in retention of sebaceous secretion, the *duct being closed*; these are, Sebaceous Miliary Tubercles, Calcareous Miliary Tubercles, Serous Cysts, and Encysted Tumours.

SEBACEOUS MILIARY TUBERCLES.

These are small tumours, of a white or pearly hue, which make their appearance upon the skin of the face, particularly around the eyelids, in variable and sometimes considerable numbers. They are usually about the size of a millet-seed, but sometimes they increase to an extent that renders them unsightly and inconvenient. The treatment to be adopted for their removal is to puncture them with a fine lancet and squeeze out their contents. Their recurrence may be prevented by touching their interior with a point of nitrate of silver.

CALCAREOUS MILIARY CONCRETIONS.

In place of containing a softish sebaceous substance, as in the preceding case, these little tumours are sometimes filled with an admixture of sebaceous substance and calcareous matter. Several cases of this nature are recorded; in one the little tumours were situated on the face, in another on the gluteal region, and in a third on the scrotum. The analysis of the contents of the tumours in the latter case gave carbonate and phosphate of lime, a trace of soda, a small proportion of fat, and some extractive matter. Mr. Dalrymple lately met with a tumour of this kind situated in the eyelid, the particulars of which are published in the last volume of the "Royal Medical and Chirurgical Transactions." In his microscopic examinations of the contents of this tumour, Mr. Dalrymple found the calcareous matter to be deposited within the epidermic scales. The treatment of this form of tumour is the same as for the preceding.

SEROUS CYSTS.

The cutaneous follicles, instead of containing sebaceous substance, are sometimes found distended with a serous fluid to an extent which renders them quite transparent. I have seen them in one situation only, viz., upon the edge of the upper eyelid, where there were two of these cysts, hanging pendulous, and as large as moderate-sized grapes. I punctured them and then touched the shrivelled cysts with nitrate of silver.

ENCYSTED SEBACEOUS TUMOURS.

The mode of formation of these tumours is identical with that of the production of sebaceous miliary tubercles, but they are more deeply situated in the integument, and increase to the size of a hazel-nut or walnut, and sometimes to that of a small orange, or even larger. They may occur on any part of the body, but are most frequently met with on the scalp or face.

The sebaceous substance collected in these sacs is variously altered in its qualities or appearance. Sometimes I have seen it limpid and fluid, like serum, and containing crystals of stearine; at other times it is soft and white, like pap, constituting the *atheromatous* tumour; again it is yellow and resembles soft bee's-wax, the *melicerous* tumour; or it may be white and fatty, the *steatomatous* tumour. When an encysted tumour attains a great size it is, in vernacular language, termed a *wen*. The contents of these tumours frequently have hairs and epidermic cells mingled with their proper substance; and when they become inflamed their contents are frequently fetid. The so-called polypi of the meatus auditorius are sometimes encysted tumours formed in the manner described.

The treatment of encysted tumours may be conducted in two modes, the one consisting in the removal of the tumour by dissection, the other in laying it freely open, to rid it of its contents, and touching its internal surface with nitrate of silver or potassa fusa. In the latter mode, stimulating injections are sometimes needed to perfect the cure.

Inflammation of the Sebaceous Glands and Adjacent Textures.

The diseases embraced by this definition are two in number, namely, Acne and Sycosis, the former affecting the sebaceous follicles on any part of the surface of the body, and the latter being confined to that of the upper lip, the chin, and the region of the whiskers. They are both chronic diseases.

ACNE.

Acne is a chronic inflammation of the sebaceous glands and their excretory hair-follicles. It is characterised by the eruption of hard, conical, and isolated elevations, of moderate size, and presenting various degrees of redness. The apices of the elevations generally become pustular and burst, while their bases remain for some time in an indolent state before they disappear. On the apices of some of these elevations the opening of the hair-follicle is distinctly apparent, while in others the aperture is destroyed by the pustule. In some the purulent fluid is mingled with softened sebaceous substance, while others subside slowly without suppuration. Some, again, scarcely differ in tint of colour from the adjacent skin, while others are highly congested and surrounded by an inflamed base of vivid redness. The varieties of acne are two in number, namely, Acne Simplex and Acne Rosacea.

Acne Simplex.

Acne simplex presents only a moderate degree of redness, and runs a course of six or eight days before suppuration is complete; a scab of moderate thickness then forms on the pustule, and the hardened base subsides by slow degrees. The pimples are not accompanied by pain unless they chance to be situated near the filament of a nerve.

Intermingled among the red, conical, and suppurating pimples, which constitute the chief feature of acne, some elevations are met with which have upon their summit a round dark-coloured spot; this is a follicle in the state which I have described under the name of comedo, and it is to this form of acne that Willan assigned the specific appellation *punctata*.

Another of Willan's specific varieties of acne was a form of pimple remarkable for the indolence of its growth. Elevations of this kind are livid, hard, and dense, they continue for several months, they often fail to suppurate, and they leave behind them indelible cicatrices. This is the *acne indurata*.

The more common seat of acne is the face, the back, and the dorsal region of the arms and thighs.

Acne Rosacea.

Acne rosacea is distinguished by the redness and congestion of its conoidal elevations; by the enlargement and frequently varicose state of the veins of the dermis; by the tardiness of course of the papular elevations, the slowness of their suppurative stage, and the indolent character of the livid and indurated tubercles which they leave behind. The integument around the elevations is of a deep purple or violet hue, and the affected integument becomes permanently thickened, uneven, and tubercular. The common seat of acne rosacea is the nose, which is often much enlarged by the morbid action; the integument and subcutaneous textures are apt to become infiltrated and thickened, and the cutaneous veins are tortuous and varicose. The entire face is sometimes disfigured by this eruption.

The *causes* of acne are very various, sometimes it appears to depend upon local disorder merely, and at others on the state of nervous, the digestive, or the uterine system.

The *treatment* of acne must be determined by the nature of the cause. The proper functions and secretions of the body must be regulated; the diet must be made as simple as practicable, and other general indications must be fulfilled. Locally, the congestion of the tubercles may be relieved by puncture and the application of a poultice. When the active congestion has been reduced, or in the milder forms of the affection, where the congestion is not great, we may have recourse to stimulating applications, such as a liniment of iodure of sulphur, or a weak lotion of bichloride of mercury in almond mixture.

SYCOSIS.

Sycosis, or, as it sometimes, though improperly, termed mentagra is a chronic inflammation of the sebaceous glands and hair-follicles of the chin, the whiskers, the eyebrows, and occasionally of the nape of the neck. The existence of this inflammatory action is marked by the development of conical pimples of a deep red hue, upon the summit of which pus is secreted, and on the rupture of the thin epidermis that contains the latter, thick, dark-coloured scabs are formed. The scabs are cast off in from one to two weeks, and the affected integument is left indurated and painful, and of a deep purple hue. Sometimes indolent tubercles are left by the eruption, and are apt, from time to time, to become again the seat of the pustular disease. The pimples and pustules of sycosis sometimes cover the entire chin, at other times they are limited to the whiskers; they are unsightly and disagreeable in appearance, and the whole integument is roughened by repeated desquamations. The pustules of sycosis, each pierced by the shaft of a hair, are very characteristic.

M. Gruby, of Vienna, has lately indicated a variety of this disease, which he terms

sycosis contagiosum. It is characterised, he observes, by the appearance of white, greyish, and yellowish scales, with angular borders, slightly raised in the middle, and pierced at all points by the hair. The scales are but loosely connected with the skin, but so closely with the hairs, that in removing a scale we at the same time pull out a hair. Microscopic examination discovers that the scales are composed of epidermic cells, but the shaft of the hair within its follicle is surrounded by a vegetable cryptogamic formation, which forms a sheath to the hair, but does not rise above the level of the follicle. The cryptogamic plant is abundantly provided with sporules, by means of which the extension of the disease is supposed to be effected.

The *causes* of sycosis are constitutional and local; those of the former kind are referrible chiefly to the nervous system, and the latter to exposure to heat or cold, the irritation caused by a blunt razor, &c. The disease occurs occasionally in females.

Treatment.—There is scarcely a disease in the whole catalogue of cutaneous complaints that is more obstinate than sycosis. You must see that all the functions of the system are duly ordered; you must establish a course of alterative medicines; and then direct your local measures so as to reduce the irritation existing in the skin in the first instance, and employ some stimulating application afterwards. I have derived more benefit from tonics than from any other class of remedies which I have employed; and locally I have found pressure by means of an air cushion of great service, paving the way to this application by leeches, puncture, &c. The vapour douche is a very useful means in this disease. Other remedies are, the zinc ointment, bichloride of mercury, sulphuret of potash, tincture of iodine, &c.

DISEASES OF THE HAIRS AND HAIR-FOLLICLES.

The pathological changes in the hairs and hair-follicles are referrible to six different heads, namely, augmented formation of hair; diminished formation of hair; alteration of colour of the hair; diseases of the hair-pulps; diseases of the hair-follicles; and abnormal direction of the hair.

Augmented Formation of Hair.

Augmented quantity of hair, so long as it occupies its normal situation, is a subject of physiological rather than of pathological interest; but when hair is developed of considerable length and in circumscribed patches on parts of the body where hair is not usually apparent, we have that state produced which is termed *pilous nævi*, moles and mother's marks. Many curious cases of pilous nævi are recorded, but individual instances must be known to every one. When pilous nævi are unsightly or inconvenient in other respects, you may be consulted as to the best method of getting rid of them. This can only be effected with any prospect of certainty by excision; and if the nævus be small, it may be removed without risk of the cicatrix being apparent.

Diminished Formation of Hair.

Diminished formation of hair gives rise to *alopecia* or baldness, and alopecia may be either congenital, accidental, or natural, the latter being termed calvities. The proximate cause of baldness is defective development of the formative pulps of the hair, or atrophy of those organs.

CONGENITAL ALOPECIA.

Baldness sometimes exists from the period of birth; such cases are rare; instances of the kind have, however, been recorded.

ACCIDENTAL ALOPECIA.

This is a much more common form of baldness of the scalp than the preceding, and is that to which Willan applied the term *porrigo decalvans;* it is also known by the appellatives, tenia tondans; alopecia circumscripta; area; tyria; and ophiasis. In some instances of this affection the baldness is limited to one or two spots of a circular form, but in others nearly the whole of the scalp is cleared, together with the eyebrows, eyelashes, beard, and whiskers. When alopecia is complete the scalp is thin, smooth, and depressed at the centre of the patch; but when there is a disposition to the reproduction of the hair, the follicles are apparent as so many dusky points, and very frequently a minute hair may be seen issuing from the aperture of each. The newly formed hair is of a light colour and thin, and is a long time before it acquires the hue of the surrounding hair.

NATURAL ALOPECIA OR CALVITIES.

Natural alopecia is the baldness of old age, or, as it is technically termed, *calvities.* This form of baldness appears to result from diminished nutrition of the scalp, for in some instances I have found the integument so transparent that the sutures of the skull could be seen through it, and on holding it to the light it was perfectly diaphonous. The integument was, indeed, too thin to afford the necessary depth for a hair-follicle to develop its hair.

The exciting causes of baldness are all such as tend to reduce the excitability of the nerves distributed to the hair-bearing skin, hence I have observed it in association with neuralgia of the supra-orbital nerves, and following very accurately their distribution. Constitutional disorder from mental anxiety is a common cause of this affection, and to these may be added long-continued disorder of whatever kind, and acute febrile diseases. Excesses producing nervous exhaustion comes under the same category. Among the

occasional causes I may specify pregnancy, rheumatism and gout, phthisis, and syphilis.

Treatment.—The indications for treatment in baldness are two-fold; firstly, to regulate the functions of the system and use such remedies as are calculated to benefit the constitutional disorder; and, secondly, to stimulate the cutaneous nerves and capillary circulation locally. By this means I have succeeded repeatedly in causing the reproduction of hair after it had fallen, and also in preventing its loss. For the plan which I consider most efficient I must refer you to my work on Cutaneous Diseases.

Alteration of Colour of the Hair.

Alteration of colour of the hair arises from disorder in the chromatogenous function of the hair-pulp, and is very commonly associated with alteration in tint of the rete mucosum of the skin. It is not uncommon to find one lock of hair different in colour from that which surrounds it, and numerous instances are recorded in which a change in the colour of the hair took place during illness or recovery from some serious disorder. Sometimes alterations of colour have been observed to take place suddenly, while blanching of the hair, the natural consequence of the torpor of age, is produced gradually.

CANITIES, OR BLANCHING OF THE HAIR.

Canities is by no means confined to old age, it may occur also in the adult or in infancy, as in the instance of the albino, where the whiteness is general; or partially in the midst of darker coloured hair. Canities, therefore, admits of classification into three forms according as its occurrence may be congenital, accidental, or senile.

Under the head of *accidental canities* must be collected all those remarkable instances in which the hair in the adult has become suddenly white from the influence of mental agony and despair. While *senile canities* tells significantly its own tale.

DISEASES OF THE PULPS OF THE HAIR.

Plica Polonica.

Little is known with regard to this remarkable disease, and authors are much divided in opinion with regard to its pathology. The hairs are swollen and imperfectly formed, they are tinged with a viscous, reddish-coloured fluid, and an abundance of this fluid is secreted by the follicles, causing agglutination, and subsequently solidification of the hair in mass. The scalp is red, inflamed, and excessively tender, so that the bare movement of the hair in the attempt made to divide it is attended with pain. It is this circumstance, with the oozing of a red serous fluid from the extremity of a cut hair, that has given rise to the idea of the hair being sarcofied and furnished with vessels and nerves. Dr. Bidder, who has lately made some communications on this disease in Muller's Archiv, states that he has seen the morbid action display itself in the hair independently of the scalp, the latter being sound, and he observed a spontaneous separation of the diseased mass take place, by a process which he likens to the disseverment of a mortified limb. Several authors agree in the statement that the scalp is unaffected.

Plica is, in an extreme degree, loathsome, disgusting odours are given forth from the diseased mass, and pediculi are engendered in great numbers. Some varieties in the appearance of plica have been observed, having reference to the mode of distribution of the hair; thus, in males, who wear the hair short, numerous locks are matted separately, constituting the *plica multiformis;* while at other times the matted hair forms a single coil, *plica caudiformis;* or, again, it is agglomerated into a single irregular mass.

Plica polonica is accompanied by severe febrile symptoms, lethargy and other symptoms of cerebral disturbance, and pruritus; little is known with regard to its treatment.

Diseases of the Hair-follicles.

The principal disorder included under this title is that remarkable affection

FAVUS OR RINGWORM.

Favus is a chronic inflammation of the hair-follicles, associated with the production of a peculiar yellowish substance which surrounds the cylinder of the hair, and is seen through the epidermis as a minute circular spot not raised above the level of the skin. The yellow substance, after a short period, escapes from the follicles upon the surface of the epidermis, and desiccates into yellowish friable crusts, forming a distinct cup with an inverted border around the base of each hair. When a number of these crusts are aggregated together, they give rise to an appearance somewhat resembling the cells of a honeycomb; hence the generic designation of the disease—*favus*. The hair included within the diseased follicle is altered in its appearance and growth; it becomes thin, discoloured, and twisted, and is eventually thrown off, the formative structure being destroyed by the extension of the disease to the deep textures of the skin. When the disorder declines the affected skin is left bald and smooth, but if it continue unchecked it gives rise to morbid alteration of all the textures down to the bones of the cranium, and is prolonged to an indefinite period. The ordinary seat of favus is the scalp, but it may extend thence to the face and neck, and, indeed, to the entire body. The disease is highly contagious, and is communicable by contact to any part of the skin.

The varieties of favus are two in number, *favus dispersus*, the porrigo lupinosa of Willan, in which individual follicles dis-

persed at various distances are affected; and *favus confertus*, in which a number of contiguous follicles are simultaneously diseased, and constitute a patch of a circular form and moderate size. This latter is the porrigo scutulata of Willan's classification.

The pathological nature of the yellow matter of favus has recently been made the subject of investigation by microscopic observers, the majority of whom agree in the organic nature of the product, and in its resemblance to those inferior members of the vegetable kingdom denominated mould. According to Dr. Gruby the cup-shaped crust of favus is situated on a depression of the dermis, and is covered by a sheath of epidermis which is thickest on its concave and thinnest on its convex surface.

Immediately within the epidermis is a thin layer of amorphous substance, composed of minute molecules; this layer is dense, of a sulphur-yellow colour, and forms a capsule, which is in contact by its external surface with the epidermis, and by its internal surface with a fungous growth. The parasitic growth is attached by means of its roots to the yellow capsule, while its stems and branches extend inwards towards the centre of the capsule, and constitute the whitish grey and porous contents of the crust. The roots and branches of the mycoderm are smooth, cylindrical, transparent tubuli, which divide dichotomously from point to point. The interior of the tubuli is filled with a granular substance, and divided here and there by transverse septa. At the ends of the branches are situated the seeds of the plant, which are of a yellowish white colour, and either collected into an irregular assemblage or disposed in the form of a garland. The diameter of the branches of the mycodermis is 1-1000th to 1-250th of a millimetre; that of the molecules contained within the tubuli 1-10,000th to 1-000th mm., and that of the seeds 1-300 to 1-100th mm. Dr. Gruby has detected seeds in the follicles of the hair and impacted in the ducts of the sebaceous glands.

Causes.—The cause of favus is a special contagion, consisting of the cells or germs of the mycodermis, conveyed either by the winds or by actual contact to the hair-follicles of a sound person. The disease is most easily excited in a weakly and unhealthy state of the system, and particularly in children of a scrofulous diathesis. When once established it is highly contagious; it affects persons of all ages, of both sexes, and at all seasons of the year, but is usually met with in children and young persons. Various circumstances predispose to this affection, as, for example, improper or deficient diet, want of ventilation, humid atmosphere, confined and unhealthy localities. When any one of these causes is present in assemblies of children, as in public schools, the disease spreads with extreme rapidity, attacking the most delicate first, and from them extending to the rest. The most frequent mode of transmission is by the employment of towels, combs, brushes, or by the use of hats or caps belonging to affected persons.

Treatment.—The indications for the treatment of favus are, firstly, to destroy the vitality of the parasitic growth; secondly, to remove all local causes of irritation; thirdly, to remove all general causes of irritation; and, fourthly, to excite the diseased hair-follicles to healthy action.

The first indication is best fulfilled by impregnating the crusts and bathing the scalp with a moderately strong solution of bichloride of mercury. This precaution, moreover, prevents the extension of the disease through the medium of fragments of the crusts.

The next care should be directed to the removal of all local causes of irritation, among which the hair and crusts occupy the first place. The removal of the hair may be effected either by shaving or with the scissors; but as the former is sometimes an inconvenient and a painful process, the latter may generally be preferred, and the more particularly as it is equally efficacious. The scalp should then be thoroughly washed with a plentiful supply of soap, and the crusts removed; this is best effected by means of a local vapour-bath, applied through the medium of a caoutchouc cap. Another mode which may be put in practice when the vapour apparatus is not at hand, is to lay a piece of folded lint, wetted in a solution of subcarbonate of soda or potash, upon the head, and cover it with an oiled silk or caoutchouc cap, which should include the entire scalp. When the crusts are wholly removed the scalp should be thoroughly washed, night and morning, with an abundance of soap, and then carefully combed; the object of the former process being to free the skin of any fresh favous matter that may escape from the follicles, and of the latter to remove the hairs which have been loosened by the disease, and which are now acting as excitants of increased irritation. In the interim of the ablutions it is desirable to keep the scalp cool by means of evaporating lotions so long as any heat of surface or redness remain.

The third indication calls for an examination into the state of health and constitution of the patient, and the employment of remedies fitted to remove any symptoms of disorder which may be then present. In some instances a course of laxative medicines may be useful, and in others tonic remedies.

The fourth indication is to be fulfilled through the agency of stimulants, of which a larger field for selection lies before you. I have generally given a preference to iodine, either in the form of vapour or in that of tincture, the latter being brushed upon the

seat of the disease several times in the course of the day, and after each ablution. Next to iodine I prefer a solution of bichloride of mercury. On the trunk and limbs the bichloride of mercury is very serviceable, as also is the nitrate of silver.

Other remedies of the stimulant class, which have been recommended, are the ioduret of sulphur in the form of ointment; chloride of lime; sulphuret of potash, either alone or combined with lime-water; solutions of the sulphates of zinc or copper; lotions of hydrocyanic, acetic, muriatic, and nitric acids; vapour of sulphur; acetum cantharidis; tar ointment; spirit of turpentine; rue; belladonna; black pepper; staves-acre, &c.

Abnormal Direction of the Hair.

Under this head are embraced two instances of alteration in the regularity and arrangement of the hair, namely, trichiasis and felting.

Trichiasis is a disease of the eyelids, in which the eyelashes, instead of occupying their natural position, are directed inwards, and rub against the surface of the cornea; the irritation caused by this friction producing inflammation and thickening of the conjunctiva. The remedy for this affection is the removal of the inverted eyelashes by means of the ciliary forceps.

Felting is a derangement of the hair arising from neglect, and has no claim to be considered as a disease. It consists merely in an inextricable interlacement of the hair, and is usually met with in women, whose long hair affords the only excuse for such a state of disorder. It has sometimes been observed after childbed.

Neuralgia from Sympathy with a Diseased Tooth. — A woman, twenty-seven years of age, was accustomed to be awakened at night with a sharp and lancinating pain—in fact tic douloureux—in the left cheek, which extended to the temple, to behind the ear, and along the anterior border of the trapezius muscle. An hour or two in the morning, during which she slept, appeared to be the sole respite she had from pain. All kinds of rubefacients and narcotics were employed without any more than momentary benefit, when it was perceived that the second molar tooth was carious, and after some delay it was extracted, when all the pains immediately ceased. Only the enamel of the tooth had been decayed; its roots were sound.—*Gazette des Hôpitaux.*

Pitting of Small-pox Prevented. — The "Gazette des Hôpitaux" reports that Dr. Rousse, a physician in the Pyrenees, has prevented the disfiguration left by the small-pox by means of covering the face with gold-leaf, and applying to the pustules a strong solution of nitrate of silver.

ESSAYS
ON THE
DISEASES OF THE EYE.

By Edward Hocken, M.D., London.

(Continued from p. 870.)

Malignant Disease of the Conjunctiva.

Genuine carcinomatous disease of the eye affects only the lids, conjunctiva, and lachrymal gland, as its primary seats. On the conjunctiva it appears as tuberculous enlargements, attended by lancinating pains and the other indications of scirrhous tubercle, which, after a longer or shorter period, go on to ulceration and the production of fungus, with much derangement of the health and cachexia.

Mr. Travers remarks that there is a malignant fungus of the conjunctiva, for, like the mucous membrane of other parts, this is sometimes the seat of carcinoma; and, excepting the lachrymal gland, he believes that no other texture related to the organ of vision is ever primarily so affected. He has removed the contents of the orbit for a painful tuberculous fungus, with ulcerated depressions, containing an ichorous discharge. The coats and humours of the eye were for the most part absorbed, the lachrymal gland scirrhous. The disease afterwards returned upon the palpebræ and destroyed the patient. In 1821 Mr. Travers had a similar case under his observation. The fleshy tubercles grew from the conjunctiva, both on the cornea and sclerotic, and the inferior palpebra was extensively ulcerated. This was accompanied by lancinating pains in the supra-orbital region, and an unhealthy discharge. (Plate 2, fig. 1.)

Melanosis, or a black fungous mass, possessing all the ordinary external and intimate appearance and structure of melanotic growths, occasionally, but very rarely, originates in the conjunctiva; by its increase it covers the front of the eye, and (for a time at least) simply covers without involving the component textures of the globe. Such disease closely simulates the more deeply seated affection in appearance when it has protruded through the ulcerated cornea, and might lead the unwary to propose and perform extirpation of the eyeball, when the disease is simply superficial, and might be removed with little or no injury to the globe, or to the function of vision. In all such cases, therefore, we should carefully weigh the history of the disease, and examine minutely the condition of the organ, ascertaining whether the growth can or cannot be lifted up from the front of the eye. The case narrated by Mr. Travers, of a "dark purple tumour," resembling a "bunch of currants,"

which grew from the conjunctiva, appears to me to be of this nature.*

Treatment.—The proper treatment for scirrhous tubercles and external melanosis would, undoubtedly, be to remove them *entirely* at the earliest possible period, without unnecessarily injuring the eyeball, and most decidedly without removing the globe. If seen sufficiently early the dissection recommended in pterygium is equally applicable here; but should the diseased portions have become so adherent to the adjoining tissues as to prevent their removal in this manner, the front of the organ must be sacrificed by a similar operation as is practised for the cure of staphyloma.

Morbid Adhesions of the Conjunctiva.

Synonym.—Symblepharon, fræna.

When the opposed surfaces of the conjunctiva of the lids and eye are rendered raw by any cause, it is difficult if not impossible to prevent their union in the subsequent healing process. The most common causes of this result are wounds, the introduction of powerful caustic matters, as lime, between the eyelids, and ulceration following inflammation. The symblepharon which thus results from the inosculation and junction of the opposed granulations, presents different appearances in different cases; occasionally the junction between the lids and globe may be complete, or nearly so; more commonly it exists in a limited portion only; and in this case the conjunctiva is drawn out by the motions of the organ into a band or fold, constituting a frænum. Such bands are sometimes thick and fleshy, at other times thin and membranous, with apparent vascular ramifications.

When once formed, adhesions of the conjunctiva do not admit, as a general rule, of cure by any *treatment*, nor can we often prevent their formation after the introduction of lime, &c. under the lids, if it occasions sloughing and ulceration of the tunic. It is true, however, that limited adhesions are rarely of serious consequence, and hence need not occasion the patient any anxiety. Mr. Tyrrell (Treat., vol. i., p. 192) has repeatedly tried by the greatest care and attention to prevent the formation of fræna; but though he succeeded in preventing the immediate inosculation of the granulations, he was never finally able to obviate the formation of a frænum. It appeared to that gentleman that a contraction of the cicatrix takes place after the healing process is completed, similar to that we so frequently see in the extensive cicatrices formed after burns in the integuments. In two cases, after excising the band or frænum, he kept a very thin and smooth piece of silver constantly between the eyelid and globe, so as effectually to prevent inosculation of granulations as the surfaces healed. When perfectly healed much good appeared to have been effected; but in less than six months, contraction of the new-formed matter had taken place, and fræna were developed as bad or worse than those which he had removed.

Injuries of the Conjunctiva by Impaction of Foreign Bodies.

The conjunctiva is exposed to injury from the intrusion of foreign substances between the lids, whether acting mechanically or chemically. By some of these blood is effused beneath its structure, or it is contused, lacerated, or incised; by others it is violently irritated, chemically changed, or its vitality destroyed.

Mechanical Injury.—One of the most common effects of slight injury is subconjunctival effusion of blood, or *ecchymosis*, which sometimes even occurs spontaneously, or from straining, coughing, and the like, and often when the blow affects the head or face, without touching the eye at all. It may complicate severe and dangerous injuries of the eye and other parts, but when it forms the only symptom it is an accident more formidable in appearance than in reality.

At first the effusion is of a bright-red colour and uniform appearance, terminating abruptly at the edge of the cornea, and when in small quantity occurring in patches with abrupt defined edges, but it becomes of a dusky-red colour as it disappears by absorption.

The *diagnosis* of ecchymosis is a matter of no difficulty, especially when it has been once seen, and its peculiarities have been carefully examined. It is known from conjunctivitis by the uniformity of its tint, the complete absence of distended vascular ramifications, its abrupt outline, and its usual occurrence in patches. Its appearance and sudden accession, with the history of its cause, would be quite sufficient to diagnose the affection under any circumstances, even where the effusion is much more considerable, and where the whole sclerotic is hid, from the cellular tissue between it and the conjunctiva being filled with red blood. Besides, all the other indications of inflammation are absent except mere redness; there is no scarlet vascular reticulation, no pain, lachrymation, or sensation of sand between the globe and lids, &c.

Mere ecchymosis, as far as I have seen, is never of the least consequence *per se*, and in whatever quantity is always removed without difficulty by the natural powers of absorption. A weak solution of the acetate of lead, used cold, may be dropped between the lids frequently in the first instance, to be replaced subsequently by a solution of sulphate of zinc. If the eye has been at the same time contused the patient should be

* Vide a case of melanosis of conjunctiva by Mr. W. W. Cooper, Lond. Med. Gaz., vol. i., p. 324, &c., 1842-3.

kept quiet, and have his alimentary canal thoroughly cleared out by an active purge or two, using leeches, &c., if any threatening symptoms of inflammation arise. If the eyelids be at the same time much loaded with effused blood they may be covered for some hours with a poultice composed of black bryony-root, scraped finely, with soaked bread, and placed in a muslin bag.

Slight incisions or contusions of the conjunctiva, such as result from accidentally forcing the finger-nail or rubbing the brim of a hat against that membrane, rarely give rise to any serious consequences. More extensive injuries call for active treatment according to their gravity.

When the eye is burnt from the explosion of gunpowder, grains of that substance are apt to be imbedded in the conjunctiva, or forced beneath it. These should be carefully removed as soon as the intense primary irritation is subdued, when this can be done without much pain to the patient, or injury to the organ. In general, we cannot remove the grains forced beneath the membrane without inflicting more injury than is desirable or necessary in the circumstances of the case, though these grains greatly disfigure the organ if they are not removed.

It is remarkable that molten lead rarely occasions very serious consequences. Mr. Tyrrell (Treat., vol. i., p. 204) has several times taken out from beneath the palpebræ portions of lead, weighing many grains, which had evidently entered the eye in a fluid state, being perfectly moulded to the surfaces of the globe and palpebræ, yet the conjunctiva remained free from all injary except slight inflammatory action. The same facts applied also to a case treated by Mr. Lawrence at St. Bartholomew's Hospital.

When pure lime gets between the lids it not only renders the cornea of a milk-white colour, but makes it so perfectly dry and friable that it can be brushed off with a hair-pencil. The action of mortar is not so powerful; it renders the cornea white, but does not decompose it. These substances occasion the patient the most violent suffering, and phenomena of the most intense irritation are set up, which do not speedily subside. Usually portions of the offending substance are found adhering to the eyelashes, and some small pieces on the conjunctiva, notwithstanding that the patient most commonly resorts at once to the diligent application of warm water to relieve the severity of his sufferings, and the abundant lachrymal and conjunctival secretions wash away the bulk of the extraneous substance. Violent inflammation of the whole conjunctiva succeeds the early impression, but the severity of these symptoms and the degree of thickness in the sloughs depends much on the quantity of lime introduced and the length of time it has been applied.

Treatment.—When it falls to our lot to see such a case, the first necessary step is to remove, with the end of a feather or a curved cataract-needle (Scarpa's needle), every portion of foreign matter which can be taken away in this manner, and to wash the conjunctiva thoroughly with some very dilute vinegar and water, if any undecomposed lime, or other portion of alkaline matter remain between the lids. Mr. Tyrrell recommends (Treat., vol. i., p. 205) the proportion of a teaspoonful of vinegar to a pint of water. It should be used warm, and thrown by means of a syringe, with care, over the surface of the conjunctiva, and beneath the lids, whilst the organ may be also freely bathed with the same mixture externally. Having thoroughly cleansed the eye from foreign matters the organ should be covered with a damp rag; venesection, leeching, &c., according to the patient's condition, should be resorted to, and abstinence, rest, and exclusion from bright light enforced, to lessen the violence of the succeeding inflammation. If the separation of sloughs be tedious, tonics may be required, with good diet, and a local, soothing, or mildly-stimulating plan of treatment, according to circumstances.

The local effects of *acids* are nearly similar to those produced by lime and alkalies, acting both chemically on the parts touched and destroying their vitality. When called on to treat such an accident, and we suspect that any unneutralised acid is still present between the lids, a little very dilute alkaline solution should be thrown between them; in case such is not to be readily got at common soap and water will prove a good substitute. The subsequent treatment will vary little in its general principles from that before laid down for subduing other forms of conjunctivitis.

Foreign Bodies on or beneath the Conjunctiva.—The introduction of a small, firm foreign body between the globe and lids gives rise to very unpleasant symptoms, as I have remarked, somewhat similar to those of strumous conjunctivitis, and if retained it often leads to severe and protracted inflammation. In all cases of obstinate chronic inflammation, or where the patient thinks something has got into the eye, and refers to some particular spot as the main seat of his uneasiness, the organ should be carefully examined. In the first place, without touching the lids, the eye should be carefully examined in an oblique direction, in order to detect anything impacted in the cornea; the lower lid should then be depressed by the common integument, in the manner already explained, and the conjunctiva lining it, and that covering the globe should be viewed in a good light and with much care, both directly and obliquely. Finally, the upper eyelid should be inverted, by placing a probe horizontally above the tarsal cartilage, seizing the lid by the eyelashes, and with care, and then raising it by these, whilst we press

downwards and backwards towards the eye gently with the probe. In this way we expose the lining of the upper lid, the conjunctiva of the upper part of the globe and the fold passing between the eye and lid. It is not only necessary to inspect these parts carefully, but we should also, by the probe, open the fold, which is large and loose, as foreign bodies are often secreted between it, especially if much swollen from inflammation.

A detached eyelash between the lids gives rise to much irritation, and sometimes a most obstinate chronic ophthalmia is found to depend entirely on a minute, light-coloured one becoming inverted. A case is related in the "Netherlands Lancet" of a man who had suffered for many months from a most painful form of conjunctivitis, attended with great photophobia, and an excessive flow of tears, when he applied for relief to Dr. Snabilie, the surgeon-major of Breda. This gentleman discovered that a minute lash had become inverted and was keeping up a constant irritation on the eye; and it is added, that no sooner was this extracted than all the previous symptoms vanished.

Cases are on record of foreign bodies being under the lids of very different characters. Even so large a foreign body as the common fly may get between the lids. Dr. Mackenzie states (Pract. Treat., p. 220) that a child was brought to him with puriform inflammation of the conjunctiva. On raising the upper lid he found a common house-fly fairly lodged beneath it, having been so for eight days. The head of the fly projected from beneath the edge of the eyelid, and produced an appearance as if the eye were disorganised.

A priest, says Manniske, of Frankenhausen (Journal für die Chir., &c., Von Just C. Loder, 2nd Band. 1st Stuck.), re uested my assistance concerning a speck on the eye. He had on the cornea of the right eye a dark speck which greatly impaired his vision. Two years before he found suddenly a little pain in the eye. By examination he remarked a black spot on the white of the eye, below the upper lid; it did not hurt his sight, and the pain soon went away, so he took no further notice of the accident. Some time afterwards he was aware that this spot had changed its situation, and appeared at the union of the cornea and sclerotica. The speck continued its progress very slowly but uninterruptedly, at length advancing on the cornea, so as to cover a portion of the pupil. At this stage there was a prominent spot above the cornea, which felt hard, equalled the size of a small lens, but was longer than it was broad. Many small red vessels appeared like streaks around it. The patient had no pain. The indescribable hardness of the spot, with its situation, led to the supposition of its being a foreign body. An incision was made on the spot from without inwards, and with the assistance of a microscope a black body was seen lying in the incision. It was removed by the point of a knife from the small hole it had formed for itself in the cornea, and was found to be the hard wing-case of a beetle.

If the conjunctiva be wounded, and the foreign body be of large size, it is apt to induce a fungous growth. In Weller's "Manual" (Monteath's translation, vol. i., p. 9) we find the case of a young girl who had a soft red fungus growing out of the eye, as large as a filbert. It was cut away, but in three weeks was as large as ever. It was again removed, and at the angle of reflection of the conjunctiva a piece of straw, half an inch in length, was observed and extracted. The cure was complete in a few days.

In smiths, and other workers in iron or steel, minute metallic particles are frequently thrown in an ignited state against the cornea, and become buried in or beneath its conjunctival covering. These bodies are sometimes so small as to lie overlooked by any but an experienced eye, at other times they are larger, more angular, and buried to a greater depth in the cornea. I omit at present the consideration of perforating wounds of the cornea, where the foreign body lodges in the anterior chamber, wounds the iris, or even penetrates to the fundus of the globe.

The removal of foreign bodies which are firmly imbedded in the conjunctiva, or even forced beneath it, requires a little patience and dexterity. Where they are of some size, and situated in the fold between the upper lid and eyeball, the lid should be inverted, and the fold separated and exposed by means of a probe, by which we can force the foreign body into view, and bring it away with a pair of forceps. When in view, and simply adherent to the conjunctiva, a curved cataract-needle is the best implement to remove them with; in general nothing more is necessary than to bring the point and side of the needle in contact with the body where it is adherent to the conjunctiva, and it comes away on the instrument without difficulty. Should it, however, have been forced beneath the conjunctiva, and it cannot readily be seen and removed by the wound already occasioned, a question arises whether we should or should not attempt its removal at the time. Supposing such substances to remain in the subconjunctival cellular tissue without inducing much inflammation at first, they often continue for years in a perfectly passive condition, and are found to be cut off or isolated by the formation of a capsule around them. In one case Mr. Wardrop (vol. i., p. 70) found a piece of whinstone lying close to the sclerotic coat, inclosed in a sac of cellular membrane, and which had remained for ten years prior to the person's death without his

experiencing the least uneasiness, or even suspecting its presence. In such a case our interference would be obviously unnecessary.

When minute foreign bodies in the cornea can be left to nature they generally become loose, and drop out by slight ulceration, which is set up around them, and unattended by any injurious consequence or serious symptom. It is stated that occasionally, though I have never seen such an occurrence,* acute corneitis is set up, the cornea becomes opake, or after inflammation has been kept up for a long time, suppuration takes place around the body, and it is thus discharged. After the removal of the offending cause the same means are necessary which I have already indicated.

Wounds of the conjunctiva are occasionally *poisoned*, as when made by the stings of bees or wasps. Such accidents give rise to intense suffering, followed by considerable inflammation and swelling. In some of these cases the sting is left as a foreign body in the wound which it has occasioned, and keeps up all the unfavourable symptoms. A case of this description is already detailed in THE LANCET (*ante*, p. 654).

IMPACTION OF LACHRYMAL CALCULI IN THE CONJUNCTIVAL FOLDS.

Calcareous concretions are occasionally, although rarely, deposited from the lachrymal secretion. Several cases are on record of such depositions being impacted in the folds of the conjunctiva and which have proved sources of mechanical irritation. Professor Walther (Gräefe and Walther's Journal, vol. i., p. 163) has narrated a curious case of this disease where the calculi were reproduced with great rapidity.

In 1811 a piece of lime fell into the eye of a healthy young woman,—it was removed by Professor Walther, whilst the eye appeared to have sustained no injury. Some time after this she began to complain of a burning stinging sensation in the eye, most severe on motion of the lids or globe, or in bright sunshine. On examination a white angular concretion was discovered between the eyeball and the lower eyelid, towards the external angle of the eye. It was about the size of a pea, and was readily rubbed between the fingers into a greasy sandy powder. Professor Walther at first supposed it to be a portion of the lime which had fallen into the eye; three days afterwards, however, the patient returned with a similar calculus in the same situation, the eye being considerably inflamed, with pain in the eye itself, and in the course of the supra-orbitary nerve, &c. On the following morning the inflammation was much increased, and another concretion lay in the lower fold of the conjunctiva, which by the succeeding day had attained as large a size as the former. Antiphlogistic measures reduced the inflammatory symptoms, but the calculi continued to form with increased rapidity, and were removed twice a-day, and at length three times a-day, from the eye. After using a solution of carbonate of potash for six days the activity of the disposition to form calculi greatly diminished. But one small concretion formed in twenty-four hours, and at length only a white crumbling powder, which required removal every second day. As, however, the disease decreased in the left it attacked the same situation in the right eye, its course being exactly the same as in the first instance, although not so severe nor lasting as in the left eye. The whole course of the disease occupied nearly ten weeks. Some years after this she was again attacked with the same disease, concretions forming first in the left eye, between the eyeball and under eyelid, and afterwards between the eyeball and upper lid. In a few days calculi began to form in the right eye. Walther ordered the solution of potash, which immediately checked their formation, and the whole process ceased in a short time. On analysis the concretions were found to be composed of carbonate of lime, with traces of phosphate of lime, and coagulable lymph, or albumen; thus resembling salivary calculi, and the tartar deposited on the teeth.

SUBCONJUNCTIVAL ŒDEMA AND EMPHYSEMA, &c.

The effusion of a serous fluid into the subconjunctival cellular tissue elevates the conjunctiva around the cornea, as in chemosis, but in simple œdema this elevation is transparent and nearly colourless, imparting a peculiar watery appearance to the eye instead of the bright scarlet protrusion of inflammatory chemosis. The fluid being unconfined in the communicating cells of the tissue, gravitates towards the most depending situation, but does not disappear or lessen from the patient's assuming another posture, the subconjunctival tissue being cut off from the subcutaneous cellular system. Such a condition of parts is occasionally seen in old and infirm individuals, of cachectic systems, connected with chronic inflammation of some of the tissues of the eye, or it may remain in connection with a relaxed state of the conjunctiva after severe conjunctivitis.

Small vesicles, or circumscribed collections of fluid, may take place under the conjunctiva, especially towards the temporal angle of the eye, and Dr. Mackenzie states (Loc. cit., p. 229) that the œdematous little fold sometimes degenerates into a cartilagi-

* Acute corneitis often results from slight wounds or scratches of the cornea, but not from the intrusion of those minute foreign bodies termed "blacks."

nous state, and requires to be snipped away. But œdema, *per se*, scarcely requires any surgical treatment except mild astringents to the membrane, combined with general tonics. If limited collections of fluid do not spontaneously disappear they may be touched with the nitrate of silver, or snipped with scissors.

Emphysema.—A collection of air in the subconjunctival cellular tissue is a rare phenomenon, and one of little consequence in itself, except as indicating the nature of an accident. When the bridge of the nose is fractured a communication is opened between the air passing through the nostrils and the cellular tissue of the eyelids, &c., which, under these circumstances, frequently become emphysematous, but the subconjunctival cellular tissue escapes. If, however, the fracture extend into the orbit and lay open some of its cells, any powerful expulsive effort of the patient's is apt to force air into the subconjunctival cells, which may occasionally be let out by a lancet if unpleasant to the patient.

In practice we meet with a few other conditions, as the consequences of conjunctival inflammation, not worthy, however, of a separate and distinct description. Of these relaxation of the conjunctiva and subconjunctival cellulartissue may demand a gentle astringent collyrium, especially when in connection with atonic hyperæmia. The cellular tissue, also, may be consolidated, and bind the conjunctiva and sclerotica more firmly together than natural, &c., but these changes are of little consequence.

Affections of the Semilunar Fold.

In the human subject the semilunar fold is merely a rudimentary body, and consists only of a duplicature of the conjunctiva. It participates in all the pathological conditions of that tunic, as we should *à priori* judge from its composition and formation. This portion of the conjunctiva is sometimes inflamed, independent of general disease, especially in company with a similar condition of the lachrymal caruncle. It gives rise to an unpleasant sensation of pricking and of dust in the inner canthus of the eye, with irritability of the organ and increased lachrymation, whilst the fold appears larger and redder than natural. Ordinary treatment only is indicated, which will generally ensure recovery, but occasionally the semilunar fold is left in an elongated and relaxed state, still retaining its crescentic form and thin loose edge; and Mr. Travers (Synopsis, p. 103, 2nd edit., pp. 395-6) remarks that fringes, or clusters of soft red caruncs, are sometimes produced from this part, resembling those occasionally seen in the site of the carunculæ myrtiformes, and about the os externum vaginæ. Melanotic tumours have also been observed to attack this fold.

(*To be continued.*)

CASE OF

LACERATION OF THE IRIS,

WITH

DISLOCATION OF THE LENS UNDER THE CONJUNCTIVA.

By George Bennett, Esq, F.L.S., Surgeon, Sydney, New South Wales.

Thomas Williams, aged 41, came to Sydney from Bathurst, for medical advice, and applied to me on the 20th of April, 1838. It appears that about nine weeks since he received a blow upon the left orbital region, at the inner part of the left eye, by which vision became immediately destroyed. The blow he received was very slight, so slight indeed as not to occasion any tumefaction of the integuments surrounding the eye; and also, judging from his statement, the whole force of the blow came over the superciliary ridge. He applied to two medical practitioners at Bathurst, who treated him by blister, local venesection, and doses of sulphate of magnesia. On examining the left eye the iris appears to be ruptured to the cornea, and through a portion of the pupil blood is seen, either produced by extravasation, or, what is more probable (as at this lapse of time absorption ought to have taken place), by the plexus of vessels being brought in view by a partial destruction of the pigmentum nigrum. Upon the upper part of the eyeball a small tumour was perceived when the eye was depressed, resembling in form the crystalline lens; he did not complain of any inconvenience or pain from it, not even when it was touched during examination. The injured eye was amaurotic,and the right eye appeared to have been similarly affected for some time previous to the accident to the left eye. During the day he could distinguish no object with the injured eye, but at night the light of a candle could be observed, and he could ascertain the situation of the candle by that light; a black spot also appeared before the eye while looking at the candle.

At first I ordered an astringent lotion to be applied to the eye, and a purgative to be taken; subsequently I treated the case with calomel and opium, and he considered the sight to be improved under the treatment. The vision, in an oblique direction, is more distinct than in a direct one, and, like albinos, better during the night than during the day.

26. On this day, assisted by A. King, Esq., R.N., surgeon of H.M.S. *Rattlesnake*, I opened the capsule before alluded to, from which a small quantity of thick viscid substance exuded, evidently being part of the crystalline lens in a decomposed state; the patient after this operation expressed himself as being much relieved, but, from the spasm of the muscles of the eye, I found it impossible

again to observe whether any remains of the crystalline lens were contained within the capsule, although, from a glance, I suspected that no more was there. Much thickening, and a turgid state of the vessels, both above and below the capsule, were perceptible. I ordered the eye to be bathed with warm water; | the calomel and opium to be repeated as before, both night and morning, and the eye to be kept quiet until the following day. The laceration of the iris appeared to be very extensive, and, indeed, implicating its whole extent. The vitreous humour remained entire, and bright blood-vessels seen behind, gave the pink appearance to that portion of the eye which is observed in *albinos* from a deficiency of the pigmentum nigrum. The lens had been forced through the choroid and sclerotic coats, and was lodged under the conjunctiva, forming a thickened sac into which, from the length of time during which the injury had been sustained (nearly ten weeks), its decomposition had taken place, occasioning considerable irritation. The patient observed that he had not been aware nor did he consider that his former medical attendants had observed the tumour of the lens, for they had not remarked it to him, and it was not until I had mentioned it to him on the first day on which he consulted me that he was aware of it, so little annoyance or inconvenience did it occasion him, although, in reality, it was a source of irritation. The right eye was affected by considerable dulness of vision which had existed for many years previous to the accident; the injured eye had, however, prior to the blow, preserved its vision unimpaired.

28. He now feels less weight and irritation of the eye since the operation, but vision has not improved, excepting that he observed this morning that, looking in an oblique direction outwards, he thought he perceived by candle-light the "shade or form of a person passing the candle," but, looking straight forward, everything appeared darker. He can readily distinguish daylight from darkness; but he considers always that he is running against a place, when, in fact, he is far distant.

May 2. He is now under the influence of the mercury, but no benefit to vision has yet resulted from it.

6. The eye easy; vision improved so far as to enable him to perceive the movement of the hand before the eye indistinctly.

9. Vision the same. R. Nutt, Esq., R.N., surgeon, of H.M.S. *Victor*, saw the patient with me, and considering that he had received all the treatment of which the circumstances of the case admitted, he returned to Bathurst in a few days.

Elizabeth-street, Sydney,
April 12, 1843.

DESCRIPTION
OF
AN EPIDEMIC OF PLEURO-PNEUMONIA
OBSERVED IN
PARIS, IN 1842.

By Henry Bennet, M.D., late House-physician to the Hospitals of St. Louis and La Pitié, Paris.

Modern pathologists appear to pay but slight attention to the abnormal manner in which those diseases which are most familar to us manifest themselves in certain years, and in certain seasons; although an acquaintance with the extreme mutability of the phenomena of disease is indispensable to the physician who wishes to acquire that kind of knowledge which alone can guide him in practice. To the medical philosopher, also, such a study is of the greatest interest, showing, as it does, the futility of laying down immutable laws for the treatment of any particular disease, and the absolute necessity of taking into consideration the mode in which morbid phenomena manifest themselves, and the progression which they follow, under the influence of causes the nature of which, in most cases, escapes our penetration. Nor is the study of disease, viewed in this light, difficult, as scarcely a season passes without giving us an opportunity of observing the endless variety of form of which disease is susceptible. Under the impression that every medical man is morally bound to communicate what he thinks may be of use to others, I have taken upon myself to give a brief description of a singular epidemic of pleuro-pneumonia which was observed in Paris during the months of February and March, of the year 1842. My attention was principally directed, during the above period, to the patients immediately under my own care, viz., those received in M. Gendrin's wards at the hospital of La Pitié, and to a few cases in private practice, but I saw enough of the medical department of the other hospitals to be able to assert that the epidemic was general, although scarcely perceived by many superficial observers.

During the ten weeks which elapsed between the 1st of February and the 15th of April, three hundred and sixty patients were received in M. Gendrin's wards, forty-five of whom were affected with pleuro-pneumonia. I say pleuro-pneumonia because in nearly every case the pleura was evidently affected. The fact of so large a proportion of the patients received being affected with pneumonia is by no means extraordinary, as the first three months of the year, and I may add April and May, are the months during which pneumonia is the most prevalent in Paris; whilst in August, Sep-

tember, and October it is, on the contrary, rare. Even in November and December it is by no means common unless the weather be cold, and then the month of December may be assimilated to January. It seems as if, on the one hand, the tendency to congestion of the lungs, and to subsequent inflammation, produced by the action of cold on the skin, persisted, in spite of the warmth of the first months of summer; whilst, on the other hand, the first chills of winter were insufficient to disturb the equilibrium which the summer has established between the circulation and secretions of the skin and lungs. This, at least, appears the most rational explanation we can give of the (at first) rather singular circumstance of the frequency of pneumonia in April and May, and its rarity in September and October. In support of these assertions I may mention that in October, 1841, at which time I was attached, as house-physician, to the infirmary for the aged at the Salpétriere, although the weather was cold, we had only two cases ofpneumonia, and which terminated favourably, whilst in January we had had forty cases, sixteen of which ended fatally; in February thirty, with thirteen deaths; in May fifteen, with six deaths; and in June ten, with five deaths. The great mortality which these returns show at the Salpétriere, is to be attributed principally to the advanced age of the patients, nearly all of whom were above sixty, and to other causes, the consideration of which will be the subject of a future memoir.

During the months of December, 1841, and January, 1842, the cases of pneumonia which entered La Pitié were in no way different from the ordinary forms of pneumonia in adults, generally occupying the posterior and inferior portion of the right or left lung, sometimes of both. From the end of January unto the middle of April every case, with one or two exceptions, presented the most peculiar and marked characteristics. The region attacked was invariably the anterior and middle portion of the right axillary region, extending in most cases into the mammary region, as far as the nipple. Sometimes the local symptoms of the disease were merely perceptible in an extent of two or three square inches; in others, the severest, they extended to the greater part of the right axillary and mammary regions. In no instance did they extend so far posteriorly as to occupy the entire width of the inferior lobe of the right lung. In a few cases there were other small portions of the lung inflamed in the supra-spinatous subclavicular, or axillary regions, but in none, with one exception, was the right axillary region free. This localisation of the inflammation was so universal, that at last, whenever the general symptoms presented by a new patient seemed to indicate pneumonia, nearly the first thing I did was to percuss the axillary and mammary regions on the right side, and in nearly every case I found absence of sound, indicating either primary pneumonia or a local pleuritic effusion, itself the result of the inflammation of the parenchyma of the lungs.

The symptoms furnished by auscultation were far from presenting that regularity in their manifestation and in the succession of their phenomena which we usually observe in ordinary pneumonia. Sometimes bronchial respiration was heard at the very onset of the disease without the crepitant râle having previously appeared. Sometimes, on the contrary, the crepitant râle was very evident from the commencement, and remained so for several days, without the respiration becoming bronchial. In a certain proportion of cases the respiration was merely weak, neither bronchial respiration nor crepitant râle being present, and then, although the dulness was extensive, the general symptoms ran high and the expectoration was sanguinolent. In most cases mucous râles were heard over a considerable extent of the lungs; in all there was acute pain in the side affected; in some, indeed, the pain was so great as to give rise to interrupted respiration. In those cases in which the bronchitis was acute and intense, sibilous râle was also heard in different portions of the lungs. In such cases there was evidently increased resonance perceived on the percussion of the lower thoracic dorsal regions, and the dyspnœa experienced by the patient was always great.

When the parenchyma of the lungs was affected in several regions the inflammation always appeared to be most extensive in the right axillary region, and merely to occupy a square inch or two of its superficies elsewhere. In no case was there serous effusion of sufficient extent to produce absence of sound in the whole inferior region of the thorax on the right side. It seemed as if a layer of the superficies of the lungs, of greater or less thickness, had become inflamed, and that the inflammation extending from it to the pleura had merely given rise to the secretion of an albuminous pus sufficiently concrete to form itself into a pseudo-membrane where it had been generated. I am inclined to think that the inflammation was generally confined to the surface of the lungs, as the respiration never became tubal, even in the severest cases; thereby showing that the pulmonary tissue surrounding the larger bronchial tubes was not hepatised.

In all cases the sanguinolent expectoration of pneumonia was present, but the sanguinolent sputæ were generally diluted by mucus, so that their viscosity was much diminished.

The cough was not very intense, but distressing to the patient, on account of the pain in the side, which it greatly exacerbated.

The general febrile symptoms ran very high in every case, both before the manifestation and during the presence of the pleuro-pneumonia. In most cases the patients complained at first of slight bronchitis, accompanied by chills, rigors, &c. These premonitory symptoms were soon followed by all the concomitants of fever, in some instances carried to such an extent as to lead one to expect the appearance of an exanthematous eruption. In such cases the skin was burning, injected, the face flushed, the eyes suffused and watery, the tongue dry and red, and the mouth parched. The patients complained of great cephalalgia, co-existing sometimes with slight delirium. The loss of strength was also very great, and accompanied by pains in the limbs. The bronchial affection was seldom very intense, although the general symptoms were so severe; it was mostly confined to the lower portion of the inferior pulmonary lobes. In some few cases in which the bronchitis assumed a more severe form, as I have before stated, the local and general symptoms of pulmonary emphysema were present.

From two to four or five days after the manifestation of the premonitory febrile symptoms, the pain in the right mammary and axillary regions appeared, and with it generally the sanguinolent expectoration. The appearance of these symptoms of the inflammation of the tissue of the lung was seldom if ever followed at once by a diminution in their intensity. In the mildest cases, however, in the course of a day or two, the febrile symptoms abated, and the inflammation did not progress beyond the second stage, that in which the crepitating râle is heard, yielding readily to rather mild treatment. In the more severe ones, the fever persisting or even increasing in intensity, the inflammation rapidly extended itself in the parenchyma of the lung, and new points became attacked; in these instances it was only by active treatment that the inflammation was subdued.

The most remarkable features of all the cases which I observed was the evident disproportion which existed between the intensity of the general febrile symptoms and the local inflammation, the latter appearing in reality an epiphenomenon of the former. Indeed, it is impossible to read the description I have given of the cases alluded to, brief as it is, without seeing that the general symptoms can in no way be considered as the result of the local inflammation, as shadowing it, if I may be allowed to use the expression, nor do I for a moment take that view of it. I look upon the epidemic I am describing as one which may in every respect be compared to the influenzas, which have attracted so much attention of late, and to the catarrhal or mucous fevers of older writers, of which Ræder and Wagler have given so interesting a description in their account of the mucous fever of Gottingen, and of which I myself saw a remarkable instance in the influenza or catarrhal fever which prevailed in Paris in 1836. I need scarcely say that in all these affections the local symptoms formed the least important feature of the disease, the general febrile phenomena being most prominent. M. Gendrin, the well-known pathologist of La Pitié, from the first, looked upon this epidemic of pleuro-pneumonia as pertaining to the above class of disease.

The general duration of the disease was from ten to fifteen or twenty days. No case terminated fatally, but in several instances the convalescence was long and difficult. In all the weakness which followed was greater than consistent with the extent and duration of the inflammatory affection. In two instances the patients never recovered, the catarrhal fever having been followed by general miliary tuberculisation, which eventually carried them off.

It is more especially in a practical point of view that the study of the modifications which seasons and years bring in the manifestation of the phenomena of disease, is of importance. Had we been guided in our treatment of the cases of pleuro-pneumonia I have just described by the ordinary rules for the treatment of pneumonia, much more active measures would have been resorted to than were really necessary, and the patients would have been unnecessarily debilitated. But we soon found that the local inflammatory symptoms being secondary and the evident result of a general febrile state of the economy, it was not necessary to resort to so energetic a treatment as the nature and extent of the disease would otherwise have indicated. In the more severe forms the patients were bled once or twice to the extent of ten or twelve ounces, but in by far the greater proportion of cases the treatment consisted merely in the application of one or two very large blisters to the back, abstinence, diluents, and rest. I must add that this is the usual treatment pursued by M. Gendrin in acute inflammations of the chest when not very severe. It would no doubt have been more judicious to have added to these agents diaphoretics, slight purgatives, &c., as would have been done by English practitioners, but my readers must not forget that I am describing French practice, in which nothing is retained but the indispensable, in which, in other words, the most important indications only are followed.

Cambridge-square, Hyde Park,
Sept. 13, 1843.

SYPHILIS is always propagated by contagion from a diseased subject to a healthy one; but the contact must be immediate, between the sore secreting inoculable matter and the spot to which it is communicated.—*Ricord.*

BELLADONNA.

To the Editor of THE LANCET.

SIR,—There is a paper in the current number of THE LANCET (page 830), by Dr. Hutchinson, of Nottingham, on the "Curative effects of belladonna in certain affections of the nervous system," in which there occurs the following passage:—"It is obvious that the employment of this remedy cannot be safe when any cause of cerebral excitement, or any symptom of determination to the brain is existing, and that the presence of any such symptoms precludes its safe administration." After contrasting the different effects of opium and belladonna, Dr. Hutchinson says, in reference to the latter, "From this I have been led to infer that its primary action is as an excitant to the cerebrum and its nerves."

Now I am inclined to think that this position is not supported either by every-day experience or by Dr. Hutchinson's own cases. I put out of consideration the term "congestion," used by Dr. Hutchinson, because I imagine that in such a state of the brain opiates and narcotics of all kinds are always contra-indicated; I also put out of consideration that state of excitement which depends on active inflammation of the brain, for here, again, another line of practice is marked out; but, using the term "excitement" in the sense usually understood, I am disposed to think that belladonna is one of the most desirable, as it is certainly one of the most powerful remedies, we possess. Let us see how Dr. Hutchinson's cases warrant the inference he draws, that "belladonna is an excitant of the cerebrum and its nerves."

Dimness of sight, giddiness, dilatation of the pupil, and cessation from pain, are in every case the uniform result of its administration. What evidence here of excitement? Do they not, on the contrary, all tend to show an opposite effect? Take, again, the no less remarkable fact that all Dr. Hutchinson's cases of cure are for excitement of a cerebral nerve. How, then, does the cessation of pain prove that the remedial agent is an excitant of the cerebrum? But then Dr. Hutchinson has prepared for this circumstance by saying that belladonna "acts on the nerves of the spinal system, or on those immediately resembling them, such as the fifth pair of cerebral nerves." But this reasoning would seem to imply that the fifth pair of nerves is quite independent of the brain; I apprehend, however, that the beneficial action in every case reported was not a specific action on the nerve itself, but an action communicated from the brain. Take, further, the common and uniform effect of belladonna on the eye; every one knows it to be great dilatation of the pupil. How? From excitement of the brain and its nerves? Precisely the reverse; for it acts as a direct sedative, and diminishes the sensibility of both. The pupil is then opened to its fullest extent, in order to allow as much light as possible to fall upon the retina; not, I would suggest, a very strong symptom of excitement.

Dr. Hutchinson says, "The only sedative appearance exists when the poison has extended its effects to the production of effusion and coma," and that then "a fatal result is rapidly approaching." Now I have myself reported a case (LANCET for April 1, 1843, page 12) where the sedative effects of belladonna were manifested in *three* and profound sleep induced in *nine minutes* (somewhat too short a time for extensive effusion to have taken place); and, moreover, the patient rapidly recovered, and is now in perfect health. I remember, too, the case of a female to whom I ordered the external application of belladonna for a severe attack of sciatica, where deep sleep was induced in a few minutes, and continued many hours, without the slightest bad symptom. The first case to which I alluded was one in which the utmost cerebral excitement prevailed, where the patient had not slept for three hundred and sixty hours, and where the strongest opiates had been tried in vain. I therefore think that Dr. Hutchinson's fears of this admirable remedy are unfounded; at the same time I sincerely join him in recommending its use in the cases he has referred to, as I am confident that no medicine possesses such certain power over every species of nervous excitement, whether arising primarily from the spinal marrow or the brain. I have the honour to be, Sir, your obedient servant,

SAMUEL FLOOD.

Leeds, Sept. 13, 1843.

PERFECT CURE WHERE ARSENIC HAD BEEN TAKEN,

BY THE

HYDRATED PEROXIDE OF IRON.

A YOUNG woman had swallowed, as was supposed, about five drachms of white arsenic. A practitioner, called to her about two hours afterwards, found her with the following symptoms:—Face flushed; eyes lachrymose; eyelids injected and half shut; some headach, but the intellectual faculties uninjured; tongue, mouth, and pharynx with their ordinary appearance, showing no trace of the poison; thirst and disagreeable metallic taste in the mouth; painful expectoration, but no constriction of the throat. The patient had vomited twice, but the matters had not been kept; one vomit was said to have been liquid, colourless, and without any intermixture of alimentary matters; the second had been also fluid, but greenish. The abdominal region was little

sensible to pressure; pulse rather frequent, full, and quite regular; respiration easy and not quickened; no irritation or eruption on the skin, the temperature of which was somewhat exalted.

A grain and a half of tartarised antimony was given, dissolved in six ounces of water, and an emollient clyster, with three ounces of olive oil. One minute after the administration of the emetic a vomiting took place of a greenish liquid and a little blood, in which arsenious acid was detected. Immediately the hydrated peroxide of iron, in a large dose, was commenced, and continued for several hours, till upwards of a kilogramme (two pounds and a half) of the peroxide had been taken. After each dose renewed vomitings occurred, by which means all the poisonous substance appears to have been got rid of from the stomach. In the evening an emollient ptisan was given, containing some nitrate of potash, which was followed by a copious stool and an abundant discharge of urine. The solution of the hydrated peroxide was persisted in as a beverage, and in eight days the patient was convalescent. The urine examined by M. Lecanu, on both the second and fifth days of the treatment, yielded a considerable quantity of arsenic.—*Gaz. des Hôpitaux*, Aug. 15th.

DISLOCATION OF THE WRIST FORWARDS.

An instance of this unusual accident is related in the "Gazette des Hôpitaux." A man, fifty years of age, and of a robust and bony frame, fell from a height and met with several bruises, but the wrist alone sustained any severe injury. Twenty-four hours elapsed before he was seen by a surgeon, who found the patient with his arm resting on a pillow and carefully avoiding movement or shaking of the limb, which was productive of much pain. The joint was swollen, though the swelling did not extend far up the arm; the fingers were slightly flexed; the carpus was distinctly felt to project in front, and the ends of the radius and ulnar on the dorsal aspect. By grasping the fingers and drawing forward the hand the luxation was reduced with ease; but on laying down the limb on the pillow, it was immediately reproduced. Two splints were now prepared and applied at the back and front of the wrist and hand, when reduction had been once more affected, and they were carefully kept bound firmly in their places for some weeks. It was not till the forty-fifth day that the surgeon could safely dispense with the splints, and the patient did not recover the use of his hand till after the use of stimulant frictions, &c., for three or four subsequent weeks. It is positively stated that the luxation was complicated with no fracture of any bone.

ORIGIN, DISTRIBUTION, AND USES, OF THE SPINAL ACCESSORY NERVE.

A Sig. Morganti, of the University of Pavia, publishes the following, as the results of various experiments which he has performed on different animals with the view of discovering the certain origins, and accordingly the functions, of the spinal accessory nerve of Willis. His conclusions are:—

1. That the spinal accessory is a motor nerve.

2. By its external branch it conveys the power of motion to the muscles to which it is distributed.

3. By its internal branch it gives motion to the muscles of the larynx, and consequently *it is the nerve which serves for the production of voice.*

4. Its external branch is composed of fibrils, which proceed from the lowest origins of the nerve in the spinal cord.

5. Its internal branch is formed of the higher fibrillæ—those which originate next beneath the pneumogastric nerve—and contributes those fibrils to the latter nerve which form the recurrent nerve and *the motor fibres of the pneumogastric throughout its course.*—*Annali Universali di Medicina*, July and Sept., 1843.

NITRE IN RHEUMATISM.

In some clinical remarks on rheumatism in the "Bulletin Gen., &c., Med. et Chir.," M. Forget thus compares the effects of three among the numerous remedies employed against that uncertain disease, viz., cod-liver oil, iodide of potassium, and nitre. Cod-liver oil is (he says) inert, or of little value. Iodide of potassium manifests utility so seldom and slowly that its applicability in rheumatism is doubtful. Nitrate of potash, in large doses, is often of decided efficacy. It fails, however, to be so in muscular, chronic articular, and very acute rheumatic affections; being most suitable in recent affections, of medium intensity, and in subjects neither very robust nor of lymphatic or nervous temperament. Nitre proves a valuable adjunct to bleeding, when that remedy fails to relieve or can no longer be practised; or, indeed, in all cases in which the loss of blood is not imperatively called for. It does not sensibly augment the urinary secretion in rheumatism, but, on the other hand, is provocative of cutaneous transpiration. It tempers, eminently, the pain and fever; but much is yet left to be discovered respecting its therapeutic action in the disease specified above and the tissues on which this action is mainly exerted.

THE LANCET.

London, Saturday, September 23, 1843.

MANY thoughtful men who practice medicine are unwilling to acknowledge that any of those remedies which are sometimes termed "specific" really possess any *specific* quality. Their reluctance results from a reasonable disinclination to admit as a truth or a principle any fact in medicine without unquestionable evidence in its favour, and forms a part of that rational scepticism which is necessary in all scientific inquiries to prevent us from being "carried away by every wind of doctrine." But the repudiation of special remedies, simply as *specific* means, although, at first sight, seeming to indicate the possession of a philosophic, as opposed to an empirical, turn of mind, may really be characteristic of an insufficient mental power, which cannot resist a repugnance to impartial investigations of alleged facts, or misapprehends the scope and bearing of arguments, or else is too indolent to go through an inquiry which is proposed even on just grounds.

There is however, reason, on close inspection, to consider that the belief in "specific" remedies for particular morbid tissues or actions is in strict analogy with much that we know for certain of the functions of life, whether in health or disease. In health, various organs are subject to peculiar and appropriate stimuli, which excite in them actions that would not be excited by the same stimuli in other organs. Light stimulates the retina to vision; vibrations excite the auditory nerve to hearing; food elicits from the alimentary mucous membrane those secretions which are essential to digestion. The blood is a universal stimulus; but its relations to the living tissues and organs vary, infinitely, according to the peculiar vital endowments of those tissues and organs. While the blood supplies every part, indiscriminately, with the materials of nutrition and renovation, each part, so supplied, exercising a peculiar function, has the power of becoming placed in a special relation to such of the constituents of the blood as are capable of ministering to that function. These are unquestionable facts in physiology, and what is the inference that may be directly derived from them in relation to our present subject? Simply that every healthy action of life results from the operation of a specific substance on a particular texture or organ. What is proposed, in exhibiting a remedy, but to re-excite those normal actions, the deviation from which produces the morbid state? Why, then, should we reject the doctrine of operating to restore health by means that are analogous to those which nature uses for its preservation, that is to say, by applying to the diseased organs, through the medium of the blood, substances which are capable of exerting upon those organs specific actions? According to such experiments as have as yet been made, every substance which exerts a specific action on a part is found to excite that action as well when injected into the circulation as when taken into the stomach, thereby demonstrating that it becomes a new and active ingredient in the blood,—one that is more capable of being placed in relation to the vital endowments of one organ than to those of another,—that it is, in short, a "specific," acting in a precisely parallel manner to that of the natural "specifics" by which all the organic functions are excited.

While this principle, which is one of the most important and universal in the philosophy of medicine, has been hitherto but little recognised, many specifics have been used empirically, and with an erroneous view of their mode of action. Nothing, for example, is more familiar to practitioners than the fact that quinine, properly administered, will cure ague with a rapidity and certainty which appears to novices to be magical, wherefore quinine is said to be a "specific" for the ague. But this view of the subject is wrong, or, indeed, it is no view at all. "Ague" is merely a word designating a set of symptoms, of whose patho-

logical cause we are ignorant, which cause, however, probably resides in disturbance of the functions of some one important organ or apparatus. Does ague arise, primarily, from disorder of the spinal cord? If so, quinine, doubtless, cures ague by operating *specifically* on that organ. Does ague consist, primarily, as some pathologists have recently maintained, in neuropathic, congestive, or other disorder of the spleen? If so, quinine cures ague by acting *specifically* on the spleen. Many other instances might be cited to show that people, in general, when reasoning on the operation of an acknowledged specific, erroneously substitute the name of the disease for its pathological cause, and thus reduce to a mere insulated point a question that is replete with interest, both to the science and the practice of medicine.

It is remarkable that however little these positions may have been adopted into the theory of medicine, the ordinary language of that science has always borne testimony to the specific action of remedies on particular organs. The very names of the different classes of medicinal agents imply a full recognition of the fact; for what mean we by talking of "cathartics," "emetics," "diuretics," "emmenagogues," for instance, unless to indicate that those medicines are generally capable of acting specifically on the intestinal tube, the stomach, the kidneys, and the uterus? But when contemplating a train of morbid phenomena of which the starting point is unknown to us, we are very apt to couple the specific remedy, should any such exist, with the name, merely, of the disease, forgetting that there is an ulterior object of inquiry, in its nature two-fold, the two parts of which may afford reciprocal illustration each to the other; for if we can discover on what organ the "specific" acts, we learn, at the same time, in what organ the disease originates, and (*vice versâ*) by accurately localising the morbid action, the specific operation of a certain substance on a particular organ is ascertained. Thus we are constantly recognising specifics in the nomenclature of medicine, and availing ourselves of their efficacy in the treatment of disease, at the very time that we injuriously exclude their consideration from medical theory. It is the wrong mode of stating the question, as well as the too general credulity in favour of the certain efficacy of remedies, that has disgusted philosophical men with the study of "specifics." Nevertheless, the inquiry is one of vast practical importance, one, indeed, which inclines to bring physiology into more direct and useful apposition with therapeutics than any other branch of medical research.

Our statements respecting the domestic condition of the working classes, and the abominable state of the great majority of their workshops, must be accompanied by our views of *the remedy* for what is wrong, whether applied by means of legislative enactments for opening broad and airy thoroughfares in the low, fever-breeding districts of London, Glasgow, Liverpool, and other densely populated towns, or by measures and reforms that should be effected without them. The general mortality is raised about one-third, and endemic diseases, as well as those of the respiratory organs, are, as respects towns, at least trebled in fatal results by the present condition of things. In many of our large towns more than one-half of the children that are born in the families of work-people die before attaining the age of five years, from maladies induced by filth and neglect. Owing to the immense number of premature deaths, the annual loss of life from *removable* causes is greater than the loss from death by wounds in any war-campaign of modern history. In fact, adverse circumstances of domiciliation produce a short-lived, improvident, reckless, and intemperate population, at once miserable in themselves and dangerous to their neighbours. These circumstances especially distinguish our community, and now the question is how to mend them.

An acquaintance with the circumstances under which our great towns have grown to their present unwieldy size shows that all the older tenements were the creations of necessity, formed without plan, as regards the health, convenience, and respectability of the places in which they are situated, deficien tat once in water, in means for carrying off refuse and in space in front and at the back. Local acts have, in some measure, remedied these wants in many large towns;* but they are seldom retrospective, applying, generally, only to future buildings; and, after all, the object can never be effectually attained by that piecemeal legislation which puts enormous sums into the pockets of solicitors and parliamentary agents, and benefits only a few of the masses. We want not petty, independent plans, discussed by committees whose views are distracted and emasculated by conflicting interests in this or that town. Some general plan, approved by the experience of skilful engineers, is needed,—a comprehensive plan, that may not be wholly carried into effect in a year or two, but which we may reasonably hope to see fully completed,—supported by an Act of Parliament compelling adherence to its provisions under competent inspectors. Here are a few hints respecting such an Act, derived from experience of the evils to be abated.

In the *first* place,—

The corporate bodies, in whom is vested the superintendence, respectively, of the sewerage, water-supply, street-cleansing, and lighting of towns, whether in London or elsewhere, should be united into a single board of management, consisting of members so elected as to ensure their personal competency to judge of and direct the requisite improvements, instead of persons whose appointments—as is the case at present—are influenced by local interest, without reference to engineering experience, or eve general competence. The evils that hav arisen, the impaired health and consequen pauperisation, the almost incredibly extravagant expenditure of public money, which have already resulted from private and irresponsible management, call loudly for this change. As to the amount of labour which the Commissioners of the Metropolis Sewers (managed by six or seven local boards) bestow on their duties, this will be sufficiently apparent from the fact stated before the House-of-Commons' committee, that at boards consisting of two or three hundred members, the attendance in 1835 never averaged more than twenty-five, or at most thirty persons, at any one meeting. And, with respect to the extravagant expenditure of such bodies, Mr. CHADWICK has calculated (Gen. San. Rep., p. 330) that, according to the amount of increases and repairs in the towns of England, the fees now paid to *official* surveyors of buildings (often—nay, in most cases—very unfit persons) would afford payment equal to that of the whole corps of Royal Engineers, comprising two hundred and forty men of science, and of all the sappers and miners under their directions. As to the proceedings of such boards we may apply to them the remarks of the late Lord CONGLETON to the trustees of public roads:—"It sometimes happens, that if one "trustee, more intelligent and more public-"spirited than the rest, attempts to take the "lead, and proposes a measure in every way "right and proper to be adopted, his ability "to give advice is questioned, his presump-"tion condemned, his motives suspected; "and, as every such measure will almost

* In nearly all cases the local Acts are most unsatisfactory, containing no powers sufficient for the proper execution of sanitary measures. In Lancashire, Staffordshire, and Worcestershire, however, there are many large industrial towns totally unprovided with any Act authorising local improvement. Rochdale, Bury, Leigh, and Wigan are more or less the constant seats of fever, induced by mal-arrangement and filth, which the town authorities are not empowered to remove. It would be well, if some general Act were passed that might ensure the "improving and regulating of all boroughs;" and, certainly, if a model of such an act be wanted, we would point to those obtained for improving Stockport and Little Bolton, as providing *local powers* fully sufficient to answer all useful purposes.

"always have the effect of defeating some "private object, it is commonly met either "by direct rejection or some indirect con- "trivance for getting rid of it."—(*Remarks on the Formation and Management of Public Roads*, 2nd ed., p. 269). With respect, also, to the appointment of surveyors or inspectors of works in most of these departments, butchers, bakers, chandlers, cabinet-makers, obtain by private local influence lucrative offices which they make useful to themselves in a variety of ways, without dreaming of (even had they the ability of promoting) the public good. To appoint in the place of such persons, who are either mere ciphers, or industrious concoctors of mischief, competent and experienced engineers, would be only a proceeding of common sense; and when we consider how closely connected are the objects entertained by the several boards now under review, it will at once be seen that harmony of operation and increased effectiveness would be induced by their union under one general committee of management.

Secondly, in order to ensure an extended scale of sanitary operations.

A body of inspectors should be appointed, who, from their professional knowledge, could accurately report the amount of the evils that they observe in their prescribed rounds, and who, from the mode of their election, could have no interest either in understating or exaggerating those evils. These officers of the public health might be qualified for their appointments by proper examination, or, in default of this, the election should be made from men of the medical profession, who, by reason of their education and experience of disease, are well calculated for estimating the insalubrity of streets and dwelling-houses. Every populous town should have its separate inspectors, two or more, as may be required; but in the rural districts, also, there should be officers to watch over circumstances affecting the health of the agricultural population. In fact, the system of sanitary inspection and operations, to be effective, must be extended over the entire country.

Thirdly, the expense of all rates levied for water, sewerage, or other sanitary operations, should be thrown off from the occupiers on to the *proprietors* of houses. Such a measure as that would be attended with good in many ways, making compulsion to pay rates less disagreeable as well as less expensive, and rendering the operations of the inspectors more effective of good towards the poor and ignorant occupiers, who might otherwise become rebellious at interference with their hovels. This once done, it would be as easy to insist on the visits of the cleanly scavenger to the humble lanes and by-ways where the industrious poor live, as to the busy highways that are lined by the shops, offices, and houses of the opulent tradesmen, merchants, and manufacturers,—nor would there, then, so often be painfully discovered the absence of water, privies, and ash-pits from whole rows of houses, which are thus made nurseries for disease.

Fourthly, an ample supply of water within the reach of the humbler classes is most important for drainage, as well as for mere detergent and culinary purposes. Streets can be soonest and most completely cleansed by water, and sewers can only be kept in a useful state by frequent flushes of water. Hence, in any measures of reform, provision must be made for at least double the present supply of water to fourth and fifth-class houses, and the Companies should be compelled to provide periodical flushes for carrying down the solid contents of the drains into the main sewers, and thence to the reservoirs or rivers in which they débouche.

Fifthly, a Building Act, of general application to every town in Great Britain, is needed,—an Act that shall contain provisions calculated to obviate the evils of closeness, mal-arrangement, and want of sewerage; laying down well-considered regulations as to the proceedings of parties who may be willing to carry out beneficial alterations, making provisions for the construction of future streets on some regular plan or system, adapted at once to ensure cleanliness and ventilation; empowering a majority of the rate-payers in any district to adopt the provisions of the Act and bind the minority; and empowering them to choose commissioners for carrying into effect the enactments, levying rates, purchasing property, completing improvements, &c.

Sixthly, some additional regulations appear to be desirable with reference to common lodging-houses (the temporary abode of the migratory portions of the lowest orders), which are at present a constant source of trouble and expense to all the parishes in which they are found, constantly breeding

fever and becoming unfailing agents in the work of demoralisation. They abound in the courts and the old streets of all large towns, are, almost without exception, in the filthiest condition, the resorts of the most wretched characters of both sexes,—beggars, trampers, thieves, and prostitutes, who throng the doors, and sit drinking and smoking all day, while at night they are bedded promiscuously—men, women, and children—in an atmosphere odorous of gin, brimstone, onions, and human miasms, more injurious even, according to Dr. B. HOWARD, than the malaria arising from animal or vegetable refuse. Thirty and forty are often herded together in a couple of small rooms, four, five, or six in a bed; and should any of the helpless inmates (as is often the case) die of typhus fever, it is by no means uncommon to find the identical, unchanged beds occupied on the very next night by fresh sleepers. Such houses should always be placed under some *surveillance* that would ensure cleanliness as well as order in them, and, perhaps, periodical lime-washings might be made compulsory measures, preventive of endemic disease. It would not be too much either to expect that in the unions, many of which spend annually some hundreds of pounds on casual, travelling poor, some moderate sums should be expended in constructing lodging-houses where (as in the London and Dublin refuge-houses) the wanderer and wayfarer might rest without fear of harm to life or property. The payments now made to the keepers by lodgers are exorbitant; even half their charge would ensure a speedy return of the outlay.

Seventhly, some measures of sanitary reform being required in the workshops occupied by the labourers during the hours of employment, an Act seems necessary, authorising the sanitary inspectors to *compel* masters to provide large, airy, and wholesome rooms for the occupation of their journeymen when at work,—rooms that should be effectually *warmed* as well as *ventilated*. It would be difficult for us, in a matter that has fully engaged the talents of such men as COUNT RUMFORD, Messrs. TREDGOLD and PERKINS, Dr. ARNOTT, Dr. D. B. REID, Dr. MEYLER, of Dublin, to determine by what particular method the end should be attained; but we repeat that no plan of heating shops, school-rooms, or other large buildings, can be considered efficient that does not promote the circulation, in large and uniform volumes, of *moderately-heated and thoroughly-oxygenated atmospheric air*. Schools, hospitals, and asylums, should be placed under some such inspection; for the ignorance of our modern pedagogues respecting the need of a pure atmosphere in their school-rooms is monstrous. We know an "Infirmary," near to Bishopsgate-street, of which the following is, according to the physician himself, a perfectly true statement:—

"The total want of sewerage and ventilation on the premises of the institution; the highly improper practice of crowding several patients into rooms, the largest of which, for seven patients, is not more than twenty-eight feet by fourteen feet, and eight feet high; the seclusion of air by stopping up the chimneys for the purpose of heating the atmosphere by means of German stoves of thin sheet-iron, which are very often at a red heat, and emit an arid carbonaceous odour; the combination of the various smells emanating from the patients' skin, expectorations, dejections, food, bed-clothes, &c., the whole aggravated by the foul air conducted from the privies and cesspool below, through the funnel-shaped space extending from the bottom of the house to the roof, without any exit to the open air, present a group of circumstances which our readers will doubtless regard as scarcely possible to exist in an institution professing to receive consumptive and asthmatic patients, and to imitate the climate of Madeira in the heart of London!"—*Builder*, Sept. 2nd.

The reform of such abuses as these, wherever they exist, is of paramount importance; and we know of no method so likely to effect it as the vigorous agency of health-officers, well backed by regulations compelling prompt obedience to their directions.

Eighthly, some legislative enactment is requisite to give effect to the suggestions of the Health-of-Towns' Committee respecting the interment of the dead, which is highly improper within the precincts of large towns. We are by no means disposed to agree with all the statements made by witnesses before that committee; but certainly suburban cemeteries are far preferable to unseemly, putrifying grave-yards, and ought to be generally adopted. Mr. Chadwick, we hear, is preparing a report on this subject, and when this is published we will give the matter all due attention.

Lastly, the augmentation of buildings and enclosed grounds in the vicinity of crowded cities seems to call for provisions to ensure

open spaces for public walks. In Derby and Sheffield grounds of this nature are already in existence. Every town in England should have its park,—open to the poor for ever.

The time has, we think, arrived, when our remarks will meet with attention. Intelligent and influential persons have commenced work on the subject, and they will not rest content until some effectual sanitary reforms have been accomplished with regard to it, and there is no humane man who will not join us in wishing them success. In fact, "when man (says Dr. Wilson, of Kelso,) shall be brought to acknowledge (as truth must finally constrain him to acknowledge) that it is by his own hand, through the neglect of a few obvious rules, that the seeds of disease are most lavishly sown in his frame, and diffused over communities, when he shall have required of medical science to occupy itself rather with the *prevention* of maladies than with their *cure*, when governments shall be induced to consider the preservation of a nation's health,—an object as important as the promotion of its commerce or the maintenance of its conquests,—we may hope, then, to see the approach of those times when, after a life spent almost without sickness, we shall close the term of an unharassed existence by a peaceful euthanasia."

With our countryman, Clifton Wintringham the school of *mathematical physicians* seemed to expire. With section A, that of "Mathematics and Physics," in the British Association of Cork, the labours of medical men had as little connection as with any of the departments into which the meetings were divided. Yet the time may come when the data of physiologists will be submitted to mathematicians, and figures be allowed to express the mysterious laws of organic life. The results of organic processes are already expressed by numbers, and the science of what is unaptly called "vital statistics" — for the statistics are not vital, but are the statistics of vitality—promises to give laws which will alike guide the surgeon in the use of his knife and the physician in the administration of medicines. With this application of figures section A had nothing to do at the Association; but still it was not without interest for the medical man, some of the most valuable papers that have been read at the section, during several meetings of the Association, being by Mr. S. Harris, a medical man, on the subjects of electricity and meteorology. Mr. Harris is at this moment engaged in making an extensive series of observations on the thermometer, the barometer, and the anemometer, for the purpose of increasing our knowledge of the laws which the ever-shifting winds and seasons obey in this country. A report on the subject was presented by Mr. Harris, at Cork. When his task is completed, important results may attach to it. In connection with such observations as these on the atmosphere, it would be desirable to possess similarly accurate observations on the states of health and disease, prosecuted at the same time, so as to establish, with some certainty, the relation that exists between atmospheric phenomena and variations from the condition of health in man.

The Chemical Section lacked papers bearing on medicine and physiology, notwithstanding that the more remarkable recent researches of chemists have been directed to the chemistry of the living body. The papers of chief importance presented at this section were those on light and heat. A communication was read from Professor Draper, of New York, on the Chemical Properties of the Sun's Rays. He has found that chlorine, exposed to the daylight, or sunshine, possesses properties which do not belong to chlorine that has been made and kept in the dark. These properties are permanent, and he thinks it probable that other bodies are similarly affected by the rays of light. It has, therefore, now been distinctly ascertained that the solar beam possesses three distinct sets of rays, namely, those possessing heating properties, which are the *calorific* rays; those producing the sensation of light, the *luminous* rays; and those that affect chemical changes, which Mr. Draper proposes to call *tithonic* rays.

The effect of the luminous rays of the sun on vegetation was illustrated by a paper

by Mr. R. HUNT. He found, by exposing plants, during their growth, to the different coloured rays, that different effects were produced. The more luminous rays prevent the healthful growth of plants. When under the influence of the red rays, plants bend from them as from something that should be avoided, while the blue, or chemical, ray is efficacious in quickening the growth of plants. Its stimulating influences, however, are too great to permit a perfect growth, leaves being formed in abundance on the stems, but not flowers. The plants flowered when afterwards placed in the yellow rays. Mr. HUNT also read a paper on the Agency of Light on Chemical Compounds, and stated it as his opinion that all bodies were, constantly, under the influence of the solar emanations, undergoing a change of state. He enumerated a list of chemical substances which, on account of the action of light upon them, may be used as photographic agents. These papers open a curious field of inquiry as to the influence of light on organic beings. A short time ago our ignorance of its agency was cloaked under the term "stimulus," and we called it a "stimulus of vegetation," &c.; but the researches of the chemist extend beyond, and are landing us upon much higher ground. The effect of light upon health was still further considered in a paper by Mr. R. DOWDEN, read to the "Statistical" section, Mr. DOWDEN's paper was occupied chiefly by suggestions. There can be no doubt that the influence of that agent upon the functions of the body is material, and that amongst the causes of increased mortality in our great towns, exclusion from the light of heaven is not the least. Free exposure to light and air is essential to the productiveness of fruit trees, to a most important extent, and vegetable and animal life are closely allied in character. Other equally interesting papers on light were read, showing how wide a field for inquiry is open to physiologists as well as natural philosophers on this subject.

A paper was read by Mr. JENNINGS on the Application of Chemistry to Agriculture, on which occasion Professor KANE admonished agriculturists not to expect too much from chemistry—a common-place warning, which need hardly be offered, either to farmers or any other kind of students who seek to improve their acquaintance with natural operations, in order to take advantage of knowledge over ignorance. There is no inquiry, whether in vegetation, or medicine, or electricity, that might not be arrested, or covered with cold water, by the same sort of prudence. How easily and reasonably might some friend of NEWTON have administered to that philosopher this kind of caution when NEWTON foresaw what astronomy would accomplish for sailors! The notorious Dr. LARDNER solemnly pronounced the impossibility of reaching America by steam. Yet he saw New York by that very means himself. So Mr. KANE cries out at Cork, "Beware of LIEBIG!"

An important paper on "the Heat of Combination" was read, from Dr. ANDREWS. The law of heat, as developed in this document, may be thus stated:—When one base displaces another from any of its neutral combinations, the heat evolved, or abstracted, is always the same when the base is the same.

Passing to Section D, that of Botany and Zoology, we may observe that in botanical papers this section was deficient. On physiological botany there was not a single paper, but in descriptive and geographical botany the communications were not without interest. Dr. HARVEY exhibited a living specimen of an Irish plant, the *Neottia Gemmipara*, an orchidaceous plant, perhaps one of the rarest of known plants, this being only the third specimen that has ever been obtained, and being not less beautiful than rare. Dr. POWER, Mr. MACKAY, Mr. NASH, and Mr. DENNIS MURRAY, contributed local lists of plants that are useful with regard to the geographical distribution of plants; and Dr. LANKESTER announced that he had discovered the presence of sulphuretted hydrogen in the cavities of the rocks of Cove, by means of the presence of the minute conferva, *Calothrix nivea*. In this case he believed that the sulphuretted hydrogen was produced by the decomposition of the sulphates of the sea-water in contact with decaying vegetable matter.

The communications to this section on zoology and comparative anatomy were exceedingly rich. From amongst the many it would be difficult to select for remark those which would be most likely to interest the medical reader; though there are but few well educated medical men of the present day who would not have listened to the whole of the proceedings with pleasure. In point of laborious research and important genera-

lisations, the report of Professor EDWARD FORBES on the results of dredging the Ægean sea was perhaps the most valuable communication. The purpose of the researches was to ascertain the species of mulluscous and radiate animals of the Eastern Mediterranean, the conditions under which they lived, and how they were associated together, and to compare the living species with those that are found fossil in the tertiary beds of the Mediterranean. These objects were fully attained. Of species of the mollusca and radiata, 700 were named. The sea was dredged to the depth of 250 fathoms; the limits of animal and vegetable life were ascertained; the distribution of species, and their association in depth, were made out; and many species, hitherto supposed to be *extinct*, were found *living*. In the course of the meeting Professor OWEN furnished a report on the fossil vegetable-feeding mammalia of Great Britain, the other orders of the mammalia having been reported on at previous meetings. This paper contained the results of a great amount of laborious research, and presented a much needed digest of the scattered information which exists with regard to the former inhabitants of this island belonging to the orders *pachydermata* and *ruminantia*, remains of the elephant (and that a gigantic species) and of the mastodon, the rhinoceros, and the hippopotamus, and of extinct genera, as the palœotherium, the anoplotherium, the chœropotamus, and the hyracotherium, having been found in various parts of Great Britain.

A report was read from Mr. BLACKWALL, on the uses of the palpi of Spiders, giving a minute account of their anatomy, and of experiments which he had performed in relation to them, drawing the conclusion that the palpi were the male organs of generation. Professor OWEN pointed out to the meeting the fact that the palpi being the organs employed in copulation, there ought to be some communication between the palpi and the testes, which were situated in the abdomen, and were very large. From this communication, and other remarks of Mr. OWEN, it would appear that the palpi are organs independent of the testes, and yet employed to carry the seminal discharge to the vulva of the female.

Various papers were read on the Habits and Structure of Invertebrate Animals. Amongst the more important of these, we refer to Professor FORBES' communication on the genus *Sagitta*, and to Messrs. ALDER and HANCOCK's paper on the Nudibranchiate Mollusca. The anatomy and development of these animals was comparatively little known, but this communication has almost concluded the subject. It was illustrated by beautiful drawings, which some means should be taken to publish, although the Association has refused to undertake the task.

We conclude our remarks on this section by alluding to the meritorious contributions of Dr. ALLMAN in various departments of zoology and comparative anatomy. His papers on the anatomy of *Plumatella Repens* and the arrangement of British fresh-water zoophytes, constitute most important additions to our knowledge of those animals.

In the Section of Statistics some valuable papers were read. The meeting opened with a paper by the late W. LEATHAM on the *lodging-houses* of our large towns, and recommended a system of licensing those houses, in order that some police-like control might be exercised over them. He pointed out that they were fertile sources of disease and immorality.

We have ourselves, in THE LANCET, recently done the same thing. It is impossible to avoid believing that clean and well regulated lodging-houses might be maintained at as little expense as the disgraceful dens which under that name now receive human beings into their embrace.

Dr. W. C. TAYLOR read a paper on the Pauper Lunatics of Ireland, developing a heart-rending mass of misery and mismanagement. The exact amount of lunacy and idiotcy that exists there did not appear from this paper, but it must be frightfully large. From want of better accommodation, we suppose, there are at present 240 lunatics and idiots in the gaols of Ireland, and 471 in various workhouses.

Major BEAMISH, Dr. BULLEN, and other members, read statistical papers proving that the "temperance movement" had done much good, and that education was on the increase. Many papers of local interest were read at this section on the manufactures, population, &c., of various parts of Ireland.

In closing our review we will glance at the grants of money made by the Association for promoting particular objects. The papers obtained by these means might easily be published in other places, but where else would money come from for promoting the

researches out of which they are produced, it is difficult to say. We will enumerate the sums as they occur. There have been awarded on behalf

Of Mathematics and Physics ..	£1207
Of Chemistry	30
Of Geology	270
Of Botany and Zoology	110
Of Medicine	10
Of Mechanics	250
	£1877

Why this disparity of grants? some persons will ask. Others may think that the sections which have been awarded but little have only asked for little. But that is not the case. The other sections have asked for more money and been refused it. The repeated award of enormous sums to section A will prove injurious to the Association. Year after year the other sections have appealed for a fairer share in the distribution, without avail. The Scotch naturalists have taken offence at the inequality, and not one of them visited Cork this year. Proposals, indeed, have been made for establishing a rival institution, in which the mathematical influence of the English Universities should be somewhat less prominent. Let us hope that the influence neither of Oxford nor of Cambridge, nor of the aristocracy there educated, will continue to induce the honest hard-working man of science to turn his back upon the Association.

A Treatise on Food and Diet, &c., with an Account of the Dietaries of numerous Public Establishments for Paupers, Criminals, &c. By JONATHAN PEREIRA, M.D., F.R.S., Examiner in Materia Medica and Pharmacy in the University of London. Longman and Co. 1843. 8vo. pp. 542.

DR. PEREIRA has proved himself to be an industrious and useful writer. Give him a good library of books on a particular subject, and he will produce as useful a cyclopædia of their contents as any man. He has trained his mind to analyse carefully, and he knows how to handle facts when they are before him, clearing, comparing, and assorting them for popular use. If his talents enable him not to penetrate far *below* the surface, yet what is *at* the surface he will cultivate diligently and successfully. No plant escapes his tillage. He reads up to the last point of discovery, and presents his volumes carefully revised to the present time. True, if he be required by a generous publisher to produce a volume of large size, he knows how to do so; but at the same time it is evident that he is sensible which parts are superfluous, and only an oblation to the "custom of the trade." Reputation cannot be made by "little blue books;" and, accordingly, this is the second work from his prolific pen of a more ambitious and expensive size.

The work cited at the head of our remarks affords fresh evidence of the competency of Dr. Pereira as an author, or, rather, editor. It contains, first, a pretty full account of the chemical elements of food, a subject of increasing interest, from the late researches and conclusions of Boussingault, Liebig, Dumas, and Payen,—secondly, a careful digest of the best analyses of all the chief alimentary principles and the newest experiments on the subject,—thirdly, a treatise on dietaries, showing the amount of nutrition in those of the great hospitals, the prisons, and the workhouses of England and France.

First we shall notice the manner in which the doctor treats the introductory and more scientific part of his work, the opening sentences of which put us in possession of its general arrangement:—

"The substances employed by man as food consist of certain compound bodies termed *alimentary principles*, which, by their mixture or union, constitute our ordinary foods;—these, for the sake of distinction, I shall denominate *compound aliments*. Thus, meat (a compound aliment) consists principally of fibrine, albumen, gelatine, hæmatosin, fat, and water (alimentary principles); wheat (a compound aliment) is composed of starch, gluten, sugar, and gum (alimentary principles). Alimentary principles, moreover, are themselves compound substances,—consisting of two, three, four, or more *simple* or *undecompounded bodies*, usually denominated *elements*;—these are the *chemical elements* or *elementary constituents of foods*. Thus, fibrine (an alimentary principle) is composed of carbon, hydrogen, nitrogen, oxygen, phosphorus, and sulphur (chemical elements); gum (an alimentary principle) consists of carbon, hydrogen, and oxygen (chemical elements).

"I propose, therefore, to consider successively—

"1. The chemical elements of food.

"2. Alimentary principles.

"3. Compound aliments."

In his description of the chemical elements of food, Dr. Pereira mentions that out of the fifty-six (so-called) elements, only thirteen enter into the composition of the human body, and, *par consequent* (as no living body

has the power, as far as we know, of forming elements, or converting one element into another), these must be the elements of our food; viz., carbon, hydrogen, oxygen, nitrogen, phosphorus, sulphur, iron, chlorine, sodium, calcium, potassium, magnesium, and fluorine. Among these the first seven take the most important share as the constituents of organised existence,—carbon, hydrogen, oxygen, and phosphorus, being essential to both animal and vegetable life, while nitrogen is powerfully instrumental in promoting the development, growth, and renovation of living animal parts, and, indeed, is an indispensable constituent of all animal tissues. We condense the author's notice of carbon as follows:—

"*Carbon* is an essential constituent of every living or organised tissue, both vegetable and animal. It is, therefore, a necessary ingredient of food; and nature has, accordingly supplied it in the aliment which she has provided for all living beings in the early stage of their existence. The quantities of it contained in some of the principal articles of food are these:—

1. *Alimentary Principles.*

	Per cent. of carbon by weight.
Anhydrous cane-sugar	47.05
Grape-sugar	36.36
Wheat-starch	37.5
Arrowroot	36.4
Gum arabic.....	36.3
Pectine.....	45.2
Acetic acid	47.06
Citric do	43.63
Tartaric do	36.36
Alcohol	52.18
Butter	65.6
Lard.....	79.1
Olive oil	77.75

2. *Compound Aliments.*

	Per cent. of carbon by weight.
Wheat, } died in vacuo	46.1
Oats, } at 230° Fah.	50.7
Potatoes	44.
Turnips	42.9
Peas.....	46.5
Fresh bread.....	30.15
Dried ox-blood	51.96
Lean meat, raw	13.6
Dry beef.....	51.89
Roasted beef	52.59
Ditto, veal	52.52

"The quantity of carbon consumed in the form of food by different individuals at different times is subject to very considerable variations influenced by age, sex, individual or national peculiarities, temperature and density of the air, kind of occupation and amount of clothing; and, from the accurate determination of the quantity of carbon daily taken into the system in food, as well of the proportion passing out of the body in the fæces and urine, unburned, *i.e.*, in some form not oxidised, it appears that an adult taking moderate exercise consumes 15⅞ oz. avoird. of carbon daily,—nearly the whole of which quantity is thrown out of the system by the lungs and skin in the form of carbonic acid. Now, 6 grains of carbon combine with 16 grains of oxygen, forming 22 grains of carbonic acid; and hence, 6702½ grains of carbon require 17,840 grains of oxygen gas to yield 24,542½ grains (about the quantity expired in 24 hours) of carbonic acid; and this quantity of oxygen must be derived from the air either by the lungs or skin, or by both. Moreover, by the union of carbon with oxygen, in any part of the system, heat must be evolved; and one pound of pure charcoal evolves by its combination in oxygen gas sufficient heat to raise the temperature of 78 lbss. of water from 32° to 212° Fah.; and this must be the amount evolved by the human subject (as above considered), independently of the heat produced by the union of oxygen with hydrogen. *In the chemical changes here referred to we have a sufficient explanation of animal temperature*; indeed, it cannot be doubted that most, if not the whole, of the heat evolved by animals is produced by chemical action, and Liebig has shown that by the conversion of starch or sugar into fat, oxygen is supplied to the system, heat being developed by the union of this disengaged oxygen with carbon. Now, in the natural and healthy condition of the system the food supplies the necessary carbon for supporting the animal heat; but when food is withheld, the fat of the body is consumed, its carbon being converted into carbonic acid, and its hydrogen into water. Experience also having satisfactorily shown that the heat of the blood is the same in all climates and in all conditions of atmospheric temperature, it follows that a larger quantity of combustible matter is required in cold climates and cold weather for keeping up this temperature than in hot climates and hot weather, since a greater amount of heat must be given off in the former than in the latter. Hence the necessity for a more liberal supply of food in cold weather; and this, doubtless, explains in a great measure the resisting powers of the natives in those frozen climates, their consumption of food being enormous and often incredible. In tropical climates, however, and even in cooler regions during summer, a smaller quantity of food suffices to keep up the animal temperature, and under the same circumstances substances containing a less proportion of carbon are better adapted for the preservation of health. Indeed, the frequent occurrence of hepatic disease among Europeans residing in tropical climates is proba-

bly owing to their continued employment of a dietetic system fitted for colder regions."—Pp. 7—21.

The above selections made with the view of condensing the author's exposition of one particular subject, abundantly show the advance that dietetics have made in consequence of the researches of Liebig, who has opened a vast mine and shown the way to work it to those who have sufficient ability to draw the wealth, and extend its important influence on the entire system of medicine.

We pass to the consideration of *nitrogen*; and here, as Dr. Pereira differs in many important particulars from the great chemist of Germany, we shall endeavour to show what arguments he employs in trying to disprove points on which Liebig has exerted his finest reasoning powers. Modern chemists are now pretty well agreed on the doctrine that blood can be made only by nitrogenised foods, which Liebig terms the "plastic elements of nutrition," whereas the non-nitrogenised foods, it is thought, are incapable of undergoing the change into blood, or of forming organised tissues, although at the same time essential to health, supporting the function of respiration, and thence called by Liebig "elements of respiration." Thus, for instance, vegetable fibrine and animal flesh are nitrogenised and important elements in the formative processes of nature, whereas fat and sugar of milk, are non-nitrogenised components of the animal frame, and neither organised nor capable of promoting organisation. Dr. Pereira, however, disputes the position of Liebig and his followers, that nitrogenised foods alone furnish the tissues; and as the discussion is interesting, we shall relate, in a condensed form, the arguments for that position, with our author's comments thereon (pp. 32—42.)

ARG. 1. *Nitrogen, one of the essential constituents of the animal tissues, cannot be created in the system, but must be derived from either the food or the atmosphere; but as in no vital process it is absorbed from the atmosphere, it must proceed from the food.*

COMMENT.—No sufficient proof has yet been furnished that nitrogen is *not* absorbed from the atmosphere; for the results of all the experiments yet made on this point have been so discordant as not to authorise any definite conclusions. Müller, under these circumstances, concludes that "nitrogen is both absorbed and exhaled by the blood during respiration." (Baly's Trans., vol. i., p. 310.) Dr. Carpenter says that in the same process "there will be a continual exosmose of carbonic acid and nitrogen, and a continual endosmose of oxygen and nitrogen." (Principles of Human Physiology, p. 438.) And Dr. Bostock observes that "it is probable that the blood, as it passes through the lungs, both absorbs and exhales nitrogen, the proportions which these operations bear to one another being very variable, depending on certain states of the system, or on the operation of external agents." That nitrogen is frequently, nay, generally, exhaled by animals, admits of no dispute; but it may still be questioned whether, when animals are supplied with food which contains a quantity of nitrogen insufficient for the wants of the system, nitrogen may not then be absorbed by the lungs, especially as Liebig's assertion is in opposition to the experiments of Priestley, Davy, Cuvier, Pfaff, Henderson, Spallanzani, and other men of acknowledged talent. Besides, another source of nitrogen has been altogether passed over, viz., the ammonia of the atmosphere, from which plants, according to Liebig, derive their nitrogen: and if plants, why may not animals derive a part, however small, of their nitrogen from the same source?

ARG. 2.—*Non-nitrogenised foods alone are incapable of supporting animal life.*

COMMENT.—Notwithstanding the experiments of Magendie (confirmed by Tiedemann and Gmelin) proving that gum, sugar, starch, or butter, cannot alone preserve the health and life of animals, the argument has, after all, not much weight; for an exclusive diet, even of nitrogenised alimentary principles, (gluten excepted), is also incapable of supporting animal life. Fibrine, albumen, or gelatine, taken separately, does not support life, and even their artificial mixture is insufficient to preserve existence; while, on the other hand, a diet of muscular flesh or raw bones, or of gluten exclusively, is capable of complete and prolonged nutrition.

ARG. 3.—*The food of all animals whatever contains nitrogenised matters identical in composition with the chief constituents of their blood and organised tissues; wherefore the carbon of gum, sugar, and starch, and the carbon and hydrogen of the fats and oils, are not required for the production of blood.*

COMMENT.—The absolute identity of animal fibrine, albumen, and caseine, with the corresponding principles in vegetables, and the presence, also, in the latter, of the same amount of sulphur, phosphorus, and phosphate of lime, as in the former, is one of the greatest discoveries made in the school of Giessen; and Liebig himself observes that "vegetable and animal fibrine, vegetable and animal albumen, hardly differ even in form. If these principles be wanting in the food, the nutrition of the animal is arrested; and, when they are present, the graminivorous animal obtains in its food the very same

principles, on the presence of which the nutrition of the carnivora entirely depends."

ARG. 4.—*The quantity of nitrogenised food consumed by herbivorous animals is amply sufficient for the growth and development of their organs, and for the supply of waste.*

COMMENT.—The truth of this statement was fully proved by the experiments of Boussingault on the horse, the food of which consumed in twenty-four hours was found to amount to 07 lb troy nearly, of which about $\frac{9}{10}$ were solid provender, and the remainder water composed of carbon = 10 lb, oxygen = 8 lb, hydrogen = 1¼ lb, and nitrogen = 4¼ oz. After deducting the nitrogen of the urine and excrements (3 oz. 1¼ dr.) from that contained in the food, the surplus quantity amounts to about $6\frac{1}{10}$ drachms; and if we assume that ordinary blood contains 80 per cent. of water, and that the dry residue (20 per cent.) contains 15.07 per cent. of nitrogen, it follows that $6\frac{1}{10}$ drachms of nitrogen are sufficient to form 5 oz. 53 grs. of dried blood, or 2 lb 1½ oz. troy, which are equivalent to 1 lb 12 oz. and 40 grs. avoird. of ordinary blood; in other words, the above quantity of food forms daily about 1¾ lb avoird. of blood. Moreover, in 100 parts of dried blood there are 52 parts nearly of carbon, and hence 5 oz. 53 grs. of blood contain about 2 oz. 43 grs. troy of carbon. Now, by subtracting the latter quantity from 5 lb 10½ oz. the residual carbon after deduction of excrements, we have 5 lb 7¾ troy = 5 lb 2 oz. avoird. to be thrown out by the lungs and skin in the form of carbonic acid; and Boussingault reckons that about 4 lb avoird. of the gas expired are pure carbon.

We have stated the results of the last experiment in what may be called round numbers, although quite near enough to show its conclusiveness on the points in question. We refrain from giving any abstract of what Dr. Pereira regards as difficulties or objections to the *unqualified* admission of Liebig's opinions on the uses of nitrogenised and non-nitrogenised foods in the animal economy; for we consider them to be more ingenious than sound and substantial.

The department of the work which describes the twelve alimentary principles, viz., water, mucilage, saccharine matter, starch, lignine, pectine, acid, alcohol, oil, proteine, gelatine, and salt, is worthy of attentive study. We may, also, call especial attention to the section in which, in discussing the uses of the alcoholic principle, some views that are entertained and propagated by the advocates of teetotalism are combatted. The chapter on compound aliments, is full of useful matter, and has evidently been elaborated with the same minute care that we have noticed as the peculiarity of Dr. Pereira in his workshop. To that portion of the work which respects diet and dietaries we shall, on account of the importance of the subject, refer in a second notice; meanwhile, urging the student to compare Mr. Ancell's account of Liebig's principles of analysis, and Liebig's own observations, we recommend Dr. Pereira's work to those who are not content with reviews, as one that contains much solid information on the subject of nutrition. At the same time, it should be added, that the volume contains not a little that is very common-place, and almost universally known. Its price, also, is far too high, considering the amount of letter-press that it contains.

EXAMINATIONS IN THE UNIVERSITY OF LONDON.

To the Editor of THE LANCET.

SIR,—The sentiments conveyed by the letter of "A Medical Student," in THE LANCET of the 2nd inst., are precisely my own, but the objection which he urges against the limited time in which to answer the questions in materia medica and botany, should also have been applied to the other departments of the examination. The questions are too comprehensive—by far too comprehensive, for the time allowed for answering them. I would direct any person to the questions on anatomy and chemistry, and ask if justice can be done them in the three hours allowed? The knowledge of a student could be tested without embarrassing him with the comprehensiveness of the questions, or if it be deemed necessary by the examiners that they should be of that comprehensive nature fewer of them should be given. It appears reasonable that the examination on botany and materia medica should not take place in the same three hours; for one would naturally regard the questions on materia medica as the most important to be answered fully and correctly, and thus there is a liability of being unable to do justice to botany, and of being rejected.

Having some thought of graduating in the London University, I have been looking over the questions of the late examination, and I cannot but express my surprise at those on botany, for I will venture to say that a student who had been working from the usual elementary works of Lindley, and from Professor Henslow's volume, would fail to answer *three or four* of the seven questions. I do trust that the senate of the London University will direct their attention to the extent of the questions, the time in which to answer them, and the nature of the botanical

questions. Perhaps it would be desirable for the examiner on botany to announce the works on the subject, within the limits of which he would restrict himself in writing the questions.

If the present system should continue I fear that the University of London will be closed to all but those who have carried away *prizes on several subjects* from the schools. I do not desire that the examinations should be less rigid, and the degrees of the university less easy of attainment, but that men who really have studied up for the examination, as a whole, should not be rejected for not having got up that which they did not conceive to come within the requirement of the regulations of the university. "Fair play is a jewel." I am, Sir, yours obediently,

ANOTHER MEDICAL STUDENT.

London, Sept. 14, 1843.

REMOVAL OF CONSTIPATION.

To the Editor of THE LANCET.

SIR,—A case of obstinate constipation has lately been treated by me most successfully with Read's newly-invented flexible tube, which the maker has added to his enema-syringe. A lady, aged eighty-one years, has for several years been subject to a sluggish state of the bowels, frequently requiring powerful aperients, together with enemata, to make any impression upon them. The bowels had not been moved for twelve days, the usual remedies (castor oil, &c., and enemata) had been tried, but without effect, and the patient sank into a state of collapse and insensibility. The colon was distended to an immense extent. I thought that hardened fæces might be the cause; I therefore, as a last resource, tried the tube in question, sixteen inches of which I passed into the colon, with the view of pushing it through the fæces and letting out the confined air. The tube slipped into the distended intestine, through the fæces, and immediately after I injected a small quantity of water, to clear the orifices of the tube. On removing the syringe from the tube an abundance of air escaped, followed by at least three quarts of liquid fæces. I then injected more water into the intestines, and so completely removed the obstruction, the old lady becoming sensible, and perfectly free from pain, and after three hours comfortable sleep she was restored. I have since, twice, used the same means with regard to this patient, and in each instance with equal success, and she is at this time in excellent health. I feel confident that had I not used this great length of tube the patient would not have survived. I am, Sir, your obedient servant,

CHARLES NEWINGTON, Surgeon.

Ticehurst, near Lamberhurst,
Sept. 18, 1843.

HOSPICE DES INCURABLES, PARIS.

VIOLENT AND FATAL CASE OF THRUSH IN AN OLD MAN.

ON the 10th of February, in the present year, a man, ætat. 75, who had been successfully treated for pneumonia, and was on the point of being discharged, was attacked suddenly with diarrhœa, which no ordinary means were able to suppress. At the same time an erythematous eruption extended down the posterior part of the thighs. The pulse rose in a few hours from 80 to 120.

11. The diarrhœa continued; pulse weak and 130, though regular. The face assumed a dull-yellow colour, which was retained to the last. Similar symptoms continued to the 16th, when the papillæ of the tip of the tongue were swollen, and the whole organ was soon of a deep red, as was, in two more days, all the interior of the mouth. On the 20th the buccal surface and tongue began to assume, in spots, a dirty whiteness, which by the 24th had spread all over the palate, uvula, tonsils, and pharynx, which were also covered with a thick and unpleasant secretion. Diarrhœa persisted.

26. The mouth was so inflamed and painful that the patient could not bear even to gargle it. Acute pain in the epigastric region; mucous vomitings, and no aliment entered the stomach that was not immediately rejected. Abdomen meteorised; stools continual, consisting of muculent matters, blood, and false membranes. On the 3rd of April the period of prostration commenced; the pulse fell to 100, and the extremities were cold. The bloody stools and vomiting continued, and the patient died on the 9th.

On opening the body the mucous membrane of the mouth and pharynx was found inflamed, and the papillæ of the tongue salient, and apparently deprived of epidermis. False membranes adhered to the base of the tongue and left tonsil, which were readily scraped off with the scalpel. The mucous membrane of the œsophagus was so softened by inflammation as to break down under the least force; and in many places in its lower quarter it was covered with circular zones, irregular patches, and spots of muquet. Several ulcerations also existed. No false membranes were discoverable in the stomach, but that organ was the seat of much vascular injection. The small intestine had apparently escaped all morbid action, but the large intestine, particularly the descending colon, presented the traces of old inflammation, with false membranes, resembling entirely those in the œsophagus; some ulcerations were also present here. The rectum and colon were thickened; most of the other organs were healthy.—*Gazette des Hôpitaux.*

POISONING BY CHERRY-LAUREL-WATER.

An infant, eight months old, and previously healthy, suffered greatly in teething, on which account the practitioner in attendance prescribed, together with leeches to the abdomen, &c., a mixture, composed of a small quantity of calomel suspended in an ounce of syrup of Tolu, two scruples of laudanum, and three ounces and a half of cherry-water (*eau de cerises noires*), of which a teaspoonful was the dose ordered. The apothecary to whom the prescription was taken being absent from home, as well as his assistant, the medicine was put up by a mere tyro, who substituted cherry-laurel-water (*eau de laurier-cerise*) for the mild vehicle above named. The infant had scarcely swallowed half a teaspoonful of the mixture when it uttered a cry, threw its head backward, became convulsed, and in a few moments died.

At the necropsy, twenty-four hours after decease, the body was found stiffened, and the abdomen rather hard and swollen. The brain and spinal cord presented no appearances worthy of notice. The stomach contained about two teaspoonfuls of a yellowish inodorous liquid, and its mucous membrane had an injected appearance in its larger curvature; the rest of the digestive canal was in a normal condition. The liquid in the stomach exhibited no trace of hydrocyanic acid, though that principle was found in such large quantity in the mixture that several rabbits and a dog died in convulsions in about two minutes after having been made to swallow a teaspoonful of it.

*** Obviously the fatal occurrence in this case was brought about by the retaining too similar names for very dissimilar objects. When found liable to induce such results why is not the very unfit name of *cherry*-laurel abandoned where cherry-water is in use, and made to follow into the oblivion that has descended upon such names as butter of antimony, flowers of sulphur, &c.?

Mr. Relph, a veterinary surgeon at Sebergham, treated a scirrhous and ulcerated tongue in a cow successfully with iodine, &c. A fluctuating elevation was felt on the tongue near the middle line, which was laid open by a free incision. Lotions of chloride of lime and alum produced no benefit, but by the use of a solution of iodide of potassium and sulphate of copper, and ung. hydr. biniod. daily to the skin under the jaw and throat, the animal got quite well. Mr. R. attributes the result in this case to the union of the copper and iodine preparations, which he thinks acted both locally and generally.

NEWS OF THE WEEK.

The deaths in the metropolis during the week ending Sept. 9, amounted to 880, or 29 less than in the preceding week, though 32 above the weekly average for the five past summers. Deaths from diseases of the brain and nervous system were 130; from those of the respiratory organs, 207; from those of the heart and great vessels, 16; and from dropsy, cancer, debility, and diseases of uncertain seat, 81 (instead of 147, 219, 25, and 105 respectively, as in the preceding week). A slight increase took place in deaths from disease of the digestive organs, they being 98 in the week ending Sept. 9 (instead of 93, as in the week previous), and 20 above the weekly average of the five past summers. In deaths from epidemic and contagious diseases, also, there was an increase; these being 231, or 11 over those of the former week, and 44 over the weekly average in summer. The fatal cases of diarrhœa and dysentery were somewhat less than in the previous week, and those from measles had decreased from 29 to 17; but deaths from typhus had increased from 33 to 45 (12 above the weekly average); deaths from hooping-cough to 26 (from 21); those from scarlatina were 41 instead of 39; and those from small-pox, 9 instead of 4.

The medical school of Guy's Hospital does not re-open until the 16th of October this year. This is in obedience to the pleasure of the council of the College of Surgeons, that henceforth no vacation should occur in the schools at Christmas. The "holidays" are thus taken *before* beginning work.

THE STUDENTS' NUMBER OF THE LANCET,

for 1843-44, will be published on Saturday next, September 30th. It will contain a vast quantity of information which will be especially devoted to the interests of Students in Medicine.

If the various officers and lecturers who are the heads of departments in the respective hospitals and schools, and teachers of medicine, do not forward prospectuses of their establishments to the Lancet-office, on or before Monday next, the 25th instant, they will only have themselves to blame for any omissions or inaccuracies which may occur in our notices of their institutions. We have already received a large number of prospectuses, and of course it will not be necessary to forward duplicates of those documents.

Mr. J. Q. Rumball, of King William-street, Strand, says, "I understand that a premium is offered for the best Essay on Monomania. Can any of your readers oblige me by stating where I can apply for particulars."